

# Solutions

## Creating the Park

The vision for the park, combined with a thorough understanding and analysis of the site, context, and ongoing projects, allows for development of solutions to transform the vision into a realistic plan. The plan developed for Capital Park presents solutions to the various challenges that must be faced, including environmental systems, transportation, and cultural resources. The plan also sets out the basis for the design of the park and the intended park program.



## Re-Casting Trenton: Making Places

The four prime actions of the Capital Park Vision (reinforce the capital core, reclaim the civic waterfront, release the Assunpink, and re-connect Trenton) create a host of new or improved places that will provide a new way of experiencing the city's civic core and waterfront. The physical and programmatic systems that extend throughout the project connect the places, provide thematic unity, and enrich the visitor experience in Capital Park.

## The Site Plan

Capital Park and associated projects, the Route 29 Boulevard and the Riverfront Neighborhood, occupy center stage in the illustrative site plan shown on the next page. They frame the New Jersey State House and transform existing highway and parking lots into green places for people to connect with nature, culture and history, and a new waterside community.

The creation of Capital Park will dramatically affect the riverfront, transforming it from an isolated strip cut off by Route 29's pavement, ramps, berms, and railings into a lush, green landscape with walks and terraces taking people to the river's edge. The front yard of the State House will change from parking lot pavement to an open lawn and fountain. The Assunpink Creek will be released from concrete and its

banks terraced and greened. The landscape of the capital campus will be enriched and made more welcoming. These actions will create the core of a transformed downtown waterfront that includes a new pedestrian-friendly Route 29 Boulevard and the proposed riverfront neighborhood.

Re-casting Trenton will start by creating New Jersey's front yard: the State House Common.



Site Plan of Capital Park

## Design Elements

Ten geometric characteristics of the capital area and waterfront govern the formal character of the plan.



**Vector:** The strong line of West State Street, parallel to the cross axis of the State House, forms the line of the campus grid in the Core area.

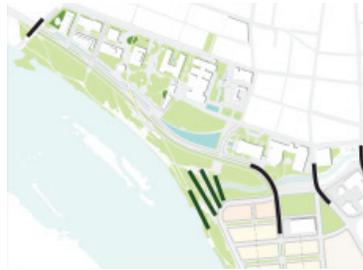
**Grid:** Based on the State House and West State Street vectors, the Campus grid organizes the form of planting beds and tree locations to help unify the disparate areas in a pattern that recalls the state's agrarian roots.

**Blob:** The irregular shape of the major woodland tree masses both proposed and existing "float" over the more geometric forms, providing a pleasant contrast.



**Arc:** The broad arc of the Delaware River, emanating from a point opposite from the Capitol dome, provides a counterpoint to the dome concentrics and establishes a powerful concave form for the riverfront park, allowing park users to look back and in upon the park from the two "bookends" of the Calhoun Street Bridge and three bridges.

**Serpentine:** The biomorphic form of the Assunpink Creek contrasts with the straight streets and expresses the presence of nature in the city.



**Bar:** The simple line of the South Broad Street Bridge contrasts with the creek curves.

**Stitches:** The splayed alignments of the bridges form "stitches" that pull together both sides of the creek.



**Heritage Triangle:** Views along axial lines from the State House dome, War Memorial, the South Broad Street Bridge, and the Battle Monument create a strong orientation in the city and anchor the major civic components of the downtown.



**Axials:** The center of the dominant symmetrical buildings, the State House and its dome and the War Memorial, are strong axial forces. The intersection of their axes lies in the State House Common. The plan should reflect these two axes in the placement of major features and vistas.

**Concentrics:** The dominant circular form of the State House dome is extended out to the landscape to provide a series of concentric rings that relate the park to the seat of government.

**Radials:** Radial lines from the center of the dome extend out to the riverfront park to mark the beginning and ends of various landscape features.



- Legend**
- 1 State House
  - 2 State House Common
  - 3 Visitors Center
  - 4 Petty's Run
  - 5 Trenton War Memorial
  - 6 Assunpink Park
  - 7 Confluence Garden
  - 8 New Jersey Garden
  - 9 Riverfront Park
  - 10 Hotel
  - 11 Calhoun St. New Development

## Places

Capital Park is comprised of distinct places, each with its unique identity set within a unified park environment. This section includes specific actions to achieve the vision of recasting Trenton. At this stage of master planning, some actions require further study before a final recommendation or feasibility assessment can be made. Several projects will require further engineering, programming, and coordination with others before a preferred solution can be finalized. In such cases, the descriptions acknowledge the need for further resolution and include a brief description of the choices.

For purposes of creating a clear and singular vision, the illustrative plan and other materials generally show the most ambitious choices that provide greatest interest and add to the richness of possibilities in the project area.



### The Places in Capital Park

This diagram shows the distinct places within Capital Park: the Cultural Center, New Jersey Garden, Visitors Center, Petty's Run, State House Common, Riverfront Park, and Assumpink Park, including Confluence Garden, Hotel Block, and South Broad Street Bridge Block.

## The Capital Core

The capital core is the heart of state government and the heart of the park. It is a civic realm with rich symbolism and amazing history. The park project is designed to create a vibrant, verdant, and engaging setting for the state capital.

The capitol core will change to become a more welcoming place for visitors, a more interesting place whose design is enriched with New Jersey-specific features, such as native planting and informative exhibits. The landscape of the core will continue to express the stately dignity of the seat of government. The core includes the upland terrace area bounded by West State Street, Calhoun Street and Barrack Street. Design actions include the following:

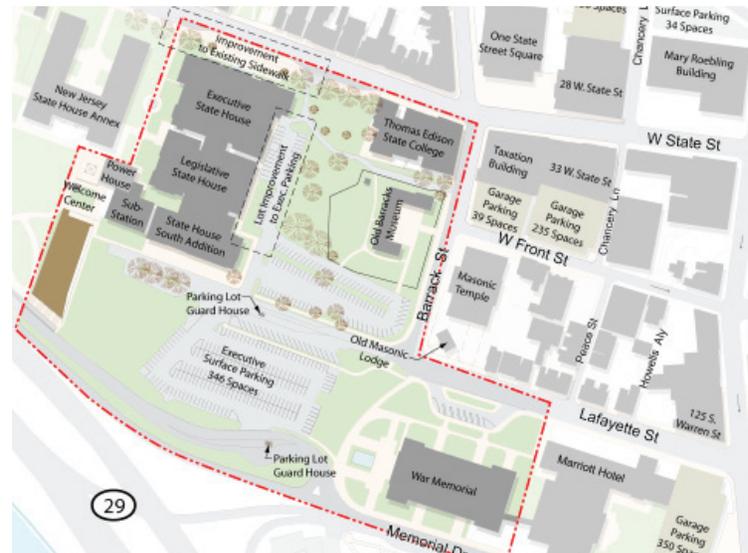
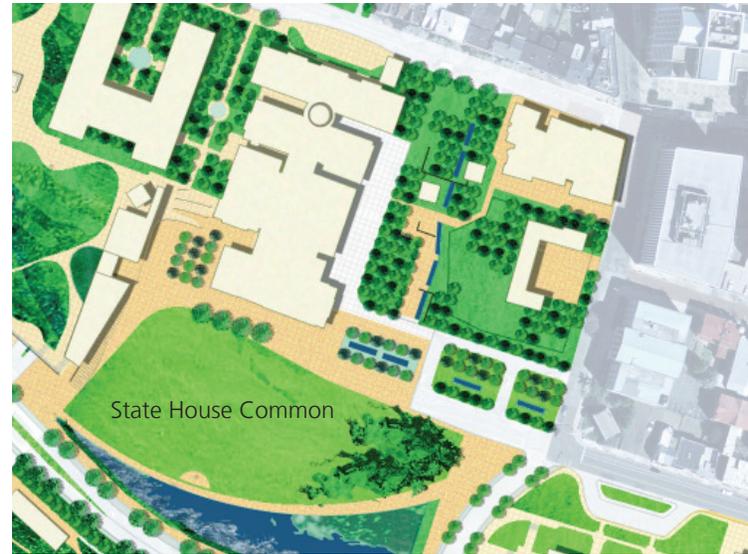
### State House Common

The State House Common is the focal point, the state's "front lawn," and highest priority project of the Capital Park. The Common is an open lawn, plaza, and civic water feature. It will serve as the setting for the State House and a major gathering place and event lawn for visitors and residents. The Common includes:

**Lawn:** a level lawn area large enough for events such as festivals, reneactments, and informal gatherings.

**Terrace:** The terrace is a gravel and lawn area shaded by a grove of trees. Tables and chairs will provide tourists and workers with an informal area to relax.

**Water Feature:** The water feature is a linear basin and fountain that evokes the historic presence of the Trenton Water Power canal. It is divided into two features: a shallow basin of still water with a wetland and aquatic fringe, recalling New Jersey's rich coastal and inland wetlands and waterways; and an active fountain basin of jets that represent the



### The Capital Core

The heart of Capital Park's civic realm is the State House Common, which will host civic events, living history and re-enactments, performances, the Trenton Film Festival, and provide a living space in the City for casual recreation.

major rivers and creeks of New Jersey. The fountain basin will be the focal point of the space and will provide a backdrop of white sound to neutralize the adjacent boulevard traffic noise. The jets will be arranged in a linear array of angled nozzles that point back towards the lawn. The arc of the jets will elevate slightly as the basin widens from north to south. Water streams will be designed flexibly to perform a limited range of effects to harmonize the fountain with the natural cycles of water such as tidal fluctuation, precipitation levels, etc. There will also be several subtle effects, including undulating ribbons and cycles of increasing and decreasing force, mist, and varying degrees of aeration of the jets. The basin will be lit for nighttime viewing and designed to appear attractive in winter when it is turned off, or to create an ice effect. The fountain water source will preferably be from a major rainwater cistern, or from the city water system, if necessary, as a back up source. In general, the principle of the fountain is to be a symbol of innovative use of sustainable infrastructure engineered to provide civic amenity.

**Walkways:** Three walkways will frame the lawn. A major east-west promenade connection will link the Arrival Plaza and the War Memorial with the State House, Visitors Center, and Garage. A walkway connecting north-south from the State House / Visitors Center to Route 29 and the riverfront park will be aligned with the radial axis from the State House dome to the river. A curving fountain walk will trace the edge of the lawn and fountain.

**State House Common:** The State House Common will be a new park space connecting the capital core and river. Actions to create this space include:

- Remove the existing parking lots between the State House and Route 29 and make a “great lawn” that serves as a welcoming common for New Jersey and a back yard for the State House.
- Create a gravel area for informal sitting next to the State House.
- Create a major water feature, synchronized with the tides and rainfall, as a focal point and source of white noise near the boulevard.
- Coordinate scheduling of re-enactments and drills, concerts, and unprogrammed times for general enjoyment of the open space.

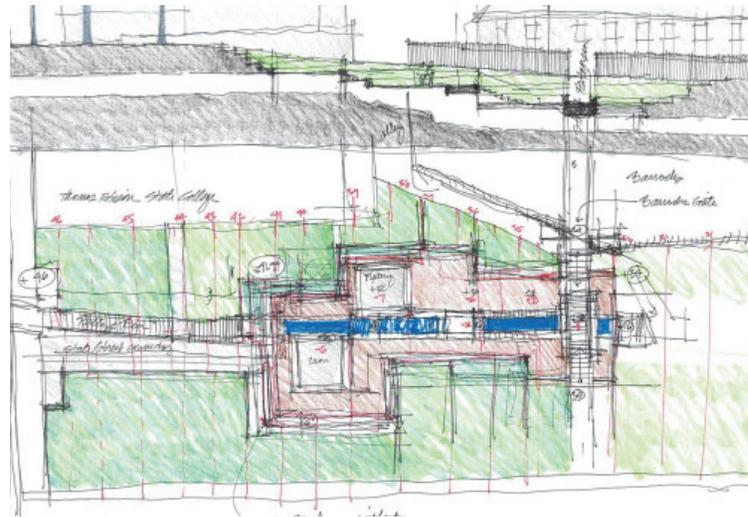
### Petty’s Run

Petty’s Run is a buried watercourse of historic importance that flows in a culvert between the State House and the Old Barracks/Thomas Edison State College. A focus of early industrial development in Trenton, Petty’s Run has long been buried and lost to view. Recasting Trenton will retrieve this lost resource and make it a focal point of historic interpretation in concert with the Old Barracks.

**Reclaim and interpret Petty’s Run as a companion to the Old Barracks.**

- Begin an interactive archaeological dig along Petty’s Run, the historic watercourse between the State House, Thomas Edison State College, and the Old Barracks.

- Work toward a goal of exposing Petty's Run and terracing the excavation in levels that correspond with the time periods.
- Provide views of building foundations of the plating mill and steel furnace, overlooks, and a small amphitheater space useful for demonstration of historic craft methods.
- Interpret and /or evoke three epochs of settlement and development: Native American, Colonial, and Industrial.
- Link programming for Petty's Run with the Old Barracks.
- Evoke the historic extension of West Front Street through the Barracks site and into the Petty's Run precinct. Excavate and restore the bridge over Petty's Run, if possible.
- Create a major new gateway to the Barracks through the stockade fence in the former location of the West Front Street extension to connect with the Petty's Run precinct.
- Determine the water flow volume, rate, and variation in Petty's Run, which has not yet been verified. It is not possible at this point to determine if it can be a reliable feature in the park design. It is assumed that it is dependent, in part, on groundwater and on stormwater.
- As the dig is completed, convert the excavated sections to an interpretive archaeological park. Because so little is known for certain at this time, this action will evolve over time. The goal will be to provide the optimal visual interest and educational impact for visitors, promote a maintainable condition, and ideally function as a part of the State



### Design Development Sketch of Petty's Run

Industry in the Colonial era drew water power from Petty's Run. Unearthing the stream will also expose foundations, a buried bridge, and other structures that will provide a setting for interpreting the history of the Capitol Core.

House perimeter security system. The design of Petty's Run itself presents several options that will be explored in the design phase:

- Leave the run buried and interpret its location on the ground surface. This would not provide a security "moat" for the State House.
- Create a shallow watercourse that evokes the flow of water of the run.
- Excavate to expose all or part of the stone and brick channel.
- Excavate and expose a portion of the run.
- Rely on existing water flow.
- Bypass the Run's channel with a separate stormwater pipe and create a recirculating flow of water.
- Consider ways to interpret the water power system of the run, for example, by recreating one of the waterwheels.

### State House Security and Executive Access

Site security measures have been proposed for the State House area by others, and will be adapted to the conditions of the proposed Capital Park. Secure access will be provided to the executive parking area east of the State House as a part of a security perimeter that includes the excavation of Petty's Run.

#### Provide secure access and parking for state officials, and a secure perimeter around the State House.

- Provide a guard booth and gated driveway to a secure executive parking area between the State House and Petty's Run.
- Design park improvements (e.g., Petty's Run, biocanal, bollards) to provide an emergency security barrier protection against vehicles.

### Visitors Center

To make the capital core more visitor-friendly and create an active frontage on State House Common, a new Visitors Center will be strategically located south of the State House Garage. Part of a larger re-design of the area between the State House and Annex, the Center will greatly expand on the existing Welcome Center and make a more open and accessible gateway to the City and State House Complex. Capital Park Visitors Center will complement the recently opened Downtown Visitors Center managed by the Trenton Downtown Association at the Old Masonic Lodge (corner of Barrack and West Lafayette Street).



**Garage Berm**

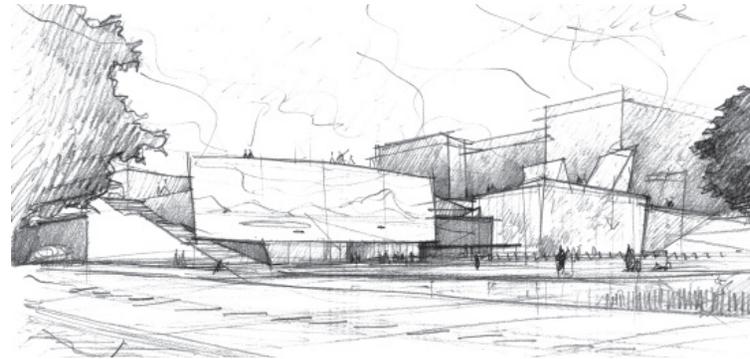
The existing garage berm is a good candidate site for a Visitors Center for the State House and Capital Park.

- Explore possibilities of direct access between the State House and Annex to create a new pedestrian corridor from the proposed Common and Visitors Center to West State Street. This access can be created either by removing the Power Plant completely or by opening up its roof for a stair access. The Power Plant building is within the State House Historic District. Demolition or modification of the building would allow for creating a set of ramps and stairs to connect the upper courtyard with the State House Common level below.
- Extend the elevator of the existing garage/welcome center to serve the garage roof deck, connecting the State House Common with the New Jersey landscape of the roof deck.
- Design an exciting new Visitors Center and café to be located in a glassy building at the foot of the State House, replacing the current bermed wall of the garage. The building façade should be high enough to cover the side of the garage.
- Relocate the function of the existing Welcome Center and program the Center to contribute to a lively range of activities on the State House Common. Accommodate the welcome center, visitor information, interpretive exhibits, a café, rest rooms, and some office space for appropriate cooperating entities.
- Create a terrace facing onto a small wetland area facing toward the Common.
- Create a paved staging and gathering area between the State House addition and the new Visitors Center.



**Visitors Center**

The Visitors Center will face State House Common, providing a cafe, information, and a meeting point for visitors to the park and the State Capitol Complex.



## Trenton War Memorial

The Trenton War Memorial is the city's major civic performance space in the downtown and a key part of the visitor experience. When it was built, the Memorial was located within former Stacy Park and its major façade and entry faced onto green space. Capital Park will retain the parking and access along Lafayette Street, make the War Memorial more accessible, and restore the park frontage.

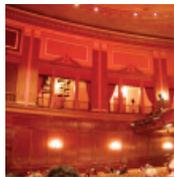
### Provide a green setting for the Trenton War Memorial and

preserve its access and service.

- Create a civic activity precinct that connects the major civic, gathering, and entertainment centers of the War Memorial, Common, and

State House. Create visual and pedestrian connections and continuity with paving and landscape design.

- Re-open the closed section of Barrack Street to connect from West Lafayette Street to the Boulevard.
- Design this length of Barrack Street so that it can be blocked off in times of major events at the War Memorial, State House, and Common.
- Reflect in the design of the parks the importance of the Memorial's axis from the front entrance north, and the important visual relation to the State House and its dome from the Memorial's front terrace.



**Trenton War Memorial**

The Trenton War Memorial hosts a wide array of community events, including the concerts of the Greater Trenton Symphony and New Jersey Symphony.



## Arrival Plaza

A new arrival plaza at the corner of Barrack and West Lafayette Streets will welcome visitors to the Capital Core and orient them to the surrounding attractions. This plaza will be a bridge from the Trenton Downtown Visitors Center in the Old Masonic Lodge to the State House Visitors Center. The plaza will allow for bus and car dropoff at a strategic node of Capital Park between the State House and War Memorial at the State House Common and the downtown commercial core.

### Create a new arrival plaza at the intersection of Barrack and Lafayette Streets.

- The arrival plaza will be the primary point of arrival for most visitors arriving by vehicle, and therefore its design provides the first message about the quality of Capital Park.
- Locate the plaza between the Old Barracks and the State House Common.
- Provide adequate space for drop off, some stacking / lay by space, and maneuvering of city, school, and tour buses.
- Design the plaza to be part of the overall ensemble of public spaces. To the extent possible, this, like the re-opened Barrack Street extension, should clearly be a pedestrian-friendly urban space that appears to be a plaza rather than a place for vehicles.
- Align walkways to connect the plaza primarily to the Visitors Center, and also to Petty's Run, the Old Barracks, the Common, the riverfront, and the War Memorial.

- Provide access from the plaza to the secure executive parking area east of the State House. Locate a guard booth at the corner of the plaza to restrict access accordingly.

### Civic Campus

The capital core will be recast as a civic campus. The intent of the campus initiative is to create a unified setting that identifies the space as one landscape that contains multiple features in a unifying design, and serves as both an employee amenity and an attraction to visitors.

#### Make a civic campus

- Design the capital core to provide a welcoming image to visitors through excellent wayfinding signage, attractive planting, and pedestrian-oriented amenities such as benches, plazas, and fountains.
- Create design standards for all paving, lighting, site furnishings, planting, signage, and site amenities.
- Create sculptural outdoor exhibits or constructions integrated with paving and walls. These exhibits are envisioned as describing various notable features of the state's natural and cultural history, its counties, and major cities to encourage people to linger and better understand New Jersey. Categories for these exhibits may include:
  - State Geography
  - State Geology ( e.g., use of stone found in New Jersey for certain constructions of walls or paving).



### The Capital Core - N.J. Garden and Cultural Center

Visitors will find a rich landscape surrounding the civic buildings of the Capital Core. The many institutions and destinations will be linked through the creation of the park.

- State Ecological Zones (e.g., use of attractive, ecologically-oriented planting design to convey educational lessons focusing on the unique environments of the state.).
- Notable New Jerseyans
- Establish a policy regarding living memorials that provides donor opportunities and specific locations for plantings dedicated as living memorials.



**Cultural Center**

The State Library / Archives, Auditorium, Museum, and Planetarium form a cultural center. The park will extend the programs of these institutions to the outdoors as part of the “Museum without Walls” concept..



**Cultural Center**

Consisting of the ensemble of the State Museum, Library / Archives, Auditorium, and Planetarium, the cultural center was conceived as a set piece of modern design. It will be reinvigorated with a more visitor and tourist-friendly landscape. The center will be integrated into the overall Capital Park interpretive program, becoming a “Museum without Walls.” The Museum without Walls concept will link the improved programming and exhibits in the landscape with the interior content of the museum, allowing for a richer and more coherent visitor experience.

The internal programming of the museum — its art, science and history collections — will be mirrored and extended into the landscape of the civic campus, riverfront, and creek with exhibits and programs.

- Create thematic zones for different types of memorials to improve legibility and avoid random placement (e.g, use groves of trees in the park dedicated to achievements, sacrifices, etc.).

#### Extend and enliven the cultural center.

- Create a “Museum without Walls” encompassing the State Museum, Library, Auditorium and Archives; spilling art, exhibits, and performances out into the landscape; and breaking down the present imposing and anonymous appearance.
- A coordinating agency should be established to manage and administer the Museum without Walls concept within Capital Park. Possible organizational models of such an agency are discussed on page 143.
- Allow for additional external art programs to be implemented in the campus, such as an outdoor sculpture park in addition to those already displayed.
- Develop a plan for exhibits that will reinforce the ideas detailed in the museum.
- Design the paving and planting to allow for external teaching and learning experiences, and for small group discussions (e.g., small spaces that can serve as impromptu amphitheaters).
- Redesign the plaza and landscape.
- Create an oval pool as a counter-point to the rectangular forms of the buildings and a focal point for the plaza.
- Reflect the concentric form of the State House dome in the plaza design as a pattern in the paving and plaza edge.

## New Jersey Garden

The rooftop of the garage landscape will be redesigned as the New Jersey Garden, drawing from a palette of native New Jersey plants. Using the constraints of the roof deck environment as an advantage, the planting will be patterned after the heath communities. Paving edges in parts of the roof deck will be curved to create a fluid image that will emphasize the connection to the natural image of the riverfront.

A new roof deck will be built over the existing parking and loading area around the Planetarium to complete the upper terrace landscape and hide the loading dock and parking areas. The roof deck will be built around and frame the planetarium as viewed from the river side.

### Create a New Jersey-specific landscape on the Garage Deck.

- Redesign the garage deck landscape to enrich the visitors' understanding of the New Jersey landscape and provide a higher degree of botanical interest.
- Keep the overall pavement area generally the same and focus on the planted area for changes. Adjust the edges of the paved areas to conform to the overall aesthetic for the park system and enhance the visitor experience of this proposed garden-like area.
- Design planting schemes of striking visual character to engage visitors.
- Use the landscape character of the deck to create a thematic bridge between the riverfront ecosystem and the more ornamental campus landscape of the capital core.

## Garage Wall Redesign

Redesign a new facade on the river face of the State House parking garage as a part of the effort to make Trenton a more walkable place and to enliven the view from Route 29.

### Wrap the garage in a dynamic wall frontage.

- Design the existing garage wall to present a more engaging view of the Capital Complex from Route 29, conveying a positive image of the state complex to travelers.
- Explore the potential to wrap the garage with a new building containing meeting rooms, offices, and convenient retail serving the park.



### Garage Wall / Wrap

The existing garage wall facing the river should be treated with materials and surfaces that provide an attractive and lively facade facing the park. The garage could also be wrapped in this location. In the same way the Visitors Center faces onto the State House Common, a new building in this location could face the river, providing a premium location for event spaces and offices.

### Calhoun Street New Development

Redesign of Route 29 provides an opportunity to capture underused space for development of state office space (or other mixed-use development) and to make an attractive gateway to the Capital Core. The corner of Route 29 and Calhoun Street is currently given over entirely to vehicles, with ramps connecting among Route 29, Calhoun Street, and West State Street. After studying many solutions to traffic flow and urban design, the recommended solution balances tradeoffs with greater advantages. Tradeoffs include acceptance of an at-grade intersection between Calhoun Street and Route 29 and the loss of a potential parking area in front of the Glen Cairn Arms buildings north of Calhoun Street. These are weighed against the extensive area gained for productive reuse by realigning Calhoun Street and bringing it to grade.

The new development area is seen as an extension of the capital campus and a way to efficiently consolidate state office and administrative functions.

### Urban Design Alternatives Considered

Several alternatives were considered to coordinate the various initiatives in this area. NJDOT's concept plan for the Calhoun/Route 29 intersection reduced the number of ramps to one. Current NJDOT plans explore the possibility of up to three roundabouts: two on Calhoun Street and one on Route 29. The master plan examined the possibility of various combinations of ramps and roundabouts. The master plan recommendations place equal emphasis on pedestrian traffic flow,

urban design, optimization of developable area, and clarity of form as on vehicular traffic flow. In the alternatives explored, it became obvious that the highway had crept into the city, displacing good urban form and pedestrians. To best serve the vision of Re-casting Trenton, it was apparent that the highway should be removed from the city and replaced with a viable urban form that clarifies vehicular flow, simplifies visitor access, enhances the pedestrian realm, increases urban efficiency by enabling the concentration of state office uses in an additional developable area, and improves the visual character of the gateway to the Capital Core. A new stop light on Route 29 will be one of several such signals already proposed.

### Extend the Capital Core to Calhoun Street with new development

Develop a strong unifying streetscape identity for West State Street between Calhoun Street and Barrack Street.

- In concert with the Route 29 Boulevard project, remove the interchange ramps and bridge and create a signalized, on-grade intersection between Route 29 and Calhoun Street.
- In the "found" area vacated by the extensive ramp and bridge complex, create building sites and open space that links to the capital campus.
- Create building sites for two office buildings with ground level parking. Align the proposed building frontage to create a signature gateway structure along Calhoun and West State Streets. Perhaps occupied by

the relocated Department of Agriculture or other state agencies, the new building will anchor the west end of the capital campus.

- Extend an axial walkway and open space from the State Library between the Museum and Auditorium to the new development.

### West State Street

West State Street is a critical frontage for the capital core, and will be improved to function as a more attractive and welcoming threshold. An enhanced streetscape of designed lighting, street tree replacements, new paving, signage, and other features will create a dignified setting for the State House and office buildings and cultural center.

#### Make West State Street the entry threshold for the Capital Core.

- Add new street trees, paving, signs and street lights along West State Street to signal the special character of the capital core.
- Develop a strong unifying streetscape identity for West State Street between Calhoun Street and Barrack Street.



### West State Street

West State Street is the gateway to the State Capitol Complex.

## The Civic Riverfront

Reclaiming the civic riverfront includes constructing a major waterfront park along the entire extent of the city's central riverfront from Calhoun Street to the fishing wharf south of the three bridges. For the first time in the city's history since Colonial times, it will be possible to take a recreational trip along the riverbank unimpeded by highway or active waterfront industry from the Island neighborhood in the north to the boat launch and Duck Island in the south, and on to the Trenton-Hamilton Marsh. The key action to enable creation of the park is the re-alignment of Route 29 inland, and the re-envisioning of the current high speed, limited access highway as an urban boulevard.

## Route 29 Boulevard

Relocating Route 29 is the key to opening access to the riverfront. The concept of changing the highway to an on-grade boulevard has been in place for almost twenty years. The master plan recommends the alignment of NJDOT's preliminary study that rebuilds the Calhoun-Assunpink segment in place but on grade, and the Assunpink-Route 1 segment inland rather than on the riverfront.

### Redesign Route 29 as a pedestrian-friendly urban boulevard.

- Remove the existing limited access roadway and ramps and leave the Assunpink Creek bridges in places.
- Realign the boulevard inland to create new double-loaded frontage along the proposed riverfront neighborhood.
- Create a new boulevard corridor with unified sidewalks, lighting, signage, and planting.
- Create an on-grade roadway.
- Provide sidewalks, street trees, street lights and pedestrian lighting.
- Reserve space for a future light rail extension of the River Line from the train station if deemed feasible by NJTransit.

### Route 29 Cross Section

Route 29 will be part of a new riverfront park that connects the Capital Complex to the Delaware River..



### Pedestrian Access Points

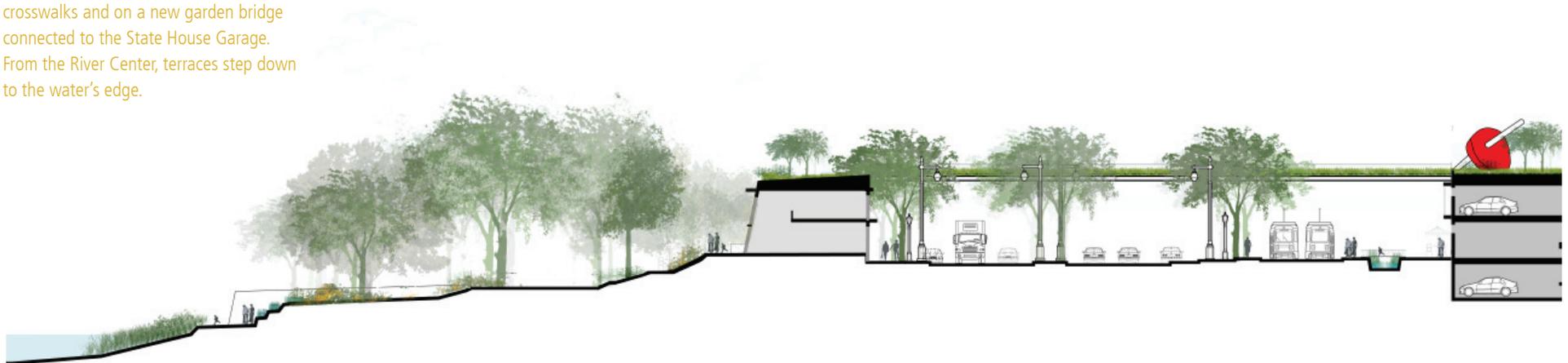
A seamless connection between downtown Trenton and the riverfront depends on creating many points of river access. Over a dozen new access points along the central riverfront will provide a variety of options for pedestrians.

#### Create numerous new pedestrian access points to the riverfront.

- Along the capital core frontage north of the Assunpink, create a “transparent” edge between the city and the river by providing up to six on-grade pedestrian crossings, one bridge overpass, and one bridge underpass.
- At the riverfront neighborhood, create a river frontage street with pedestrian crossings at each intersection.

### Cross Section through Route 29 at the River Center

Pedestrians can cross Route 29 on crosswalks and on a new garden bridge connected to the State House Garage. From the River Center, terraces step down to the water's edge.



### Riverfront Park

Extending from Calhoun Street to the three bridges, the riverfront park will be the hub of the city's open space system. It will provide a connection between Stacy Park to the north of Calhoun Street and the riverfront park south of the three bridges to the Assunpink Greenway, the D&R Canal, and across the river to the D&L National Heritage Corridor and trail. While limited in width, the park is large enough to provide a quality riverfront experience and generous gathering spaces. The north and south parks will be designed as a single composition, but with different characters that will provide variety of experience and address the difference between the adjacent civic land use in the north and mixed use in the south. A suitable name will need to be assigned to the Riverfront Park at a later stage that would provide reference to the falls of the Delaware.



**Recasting Trenton celebrates the value of water in Trenton's history, uses water as a theme to enrich the visitor experience, and honors the importance of water quality.**

The new landscape of roads, paths, bridges, drainage, and utilities recasts Trenton as a green, healthful city, reusing infrastructure and creating new models of sustainable landscape.



Aerial view of Capital Park

Create a new riverfront park that allows unrestricted river access from Calhoun Street to the three bridges.

- Create a series of walks, steps, and ramps to allow able-bodied and disabled pedestrian access down to the water's edge, and to provide a broad water level terrace for events and gatherings.
- Reinforce the wooded northwest end of the park as a floodplain forest.
- Enhance the river-edge planting to create an improved habitat ranging from floodplain forest to meadows and marshes.
- Provide limited access for canoes and kayaks upstream from the water level terrace.
- Provide paths along the river's edge for fishing access and strolling.
- Design the park as an extension of the concentric form of the dome, symbolically linking state and river. Create a unified park design that will extend to the southern limit of the riverfront park.
- Design the north and south parks as complementary places, using the sinuous form of concentric arcs, convex in the north and concave in the south, as the basis for the form of terraces, walks, and planting.

### Riverfront Park South

Riverfront Park South extends between the river's edge and the riverside frontage drive from the Assunpink Creek to the Route 1 bridge. The park includes walkways at the street and water levels. Access points are provided at all intersections with the riverside drive. A broad amphitheater will terrace down from the drive to the water.

- Provide high value frontage for the new riverfront neighborhood.
- Extend the river park from the Assunpink confluence to the three bridges, in the location of former Route 29.
- Design and program the park in concert with the upstream portion, primarily to serve city and regional purposes, while also allowing for amenities for the new neighborhood.
- Connect pedestrian access to the "Trenton Makes" Bridge.
- Daylight storm sewers from the streets of the neighborhood and direct the flow to a sculptural eco-cascade that will allow for aeration and filtration of runoff before it flows to the river. The cascades will be designed to be safe and interesting focal points when flowing, and attractive sculptural terraces when dry.
- Create a riparian fringe planting of shrubs and emergent vegetation along the lower walkway.
- Create river connection terraces at major entryways and the amphitheater.

### Landscape Bridge

The proposed landscape bridge will link the upper level of the capital core with the riverfront park without the use of steps or elevators. Traversing the bridge will be a dramatic experience of entering the river landscape with a curving panorama of the riverfront.

- Link the garage deck and river with a sweeping signature landscape bridge.
- Reflect the relation with the State House dome by aligning the bridge along a concentric circle centered on the dome.

- Design the bridge to allow the rooftop and river park landscapes to interconnect.
- Interconnect the bridge with the proposed river center.

### River Pavilion

The proposed river pavilion will be located opposite the garage, on the northwest side of the boulevard. It will include a small environmental education center and riverfront café.

- Build the new river center to house an environmental education program and café.
- Design the river center as an integral part of the river park and bridge.
- Create an airy building that is open to the river views and a stylistic companion to the garage-face building and the Visitors Center.
- Develop an environmental education program and exhibits highlighting the waterfront and urban ecosystems.

### Bio-canal

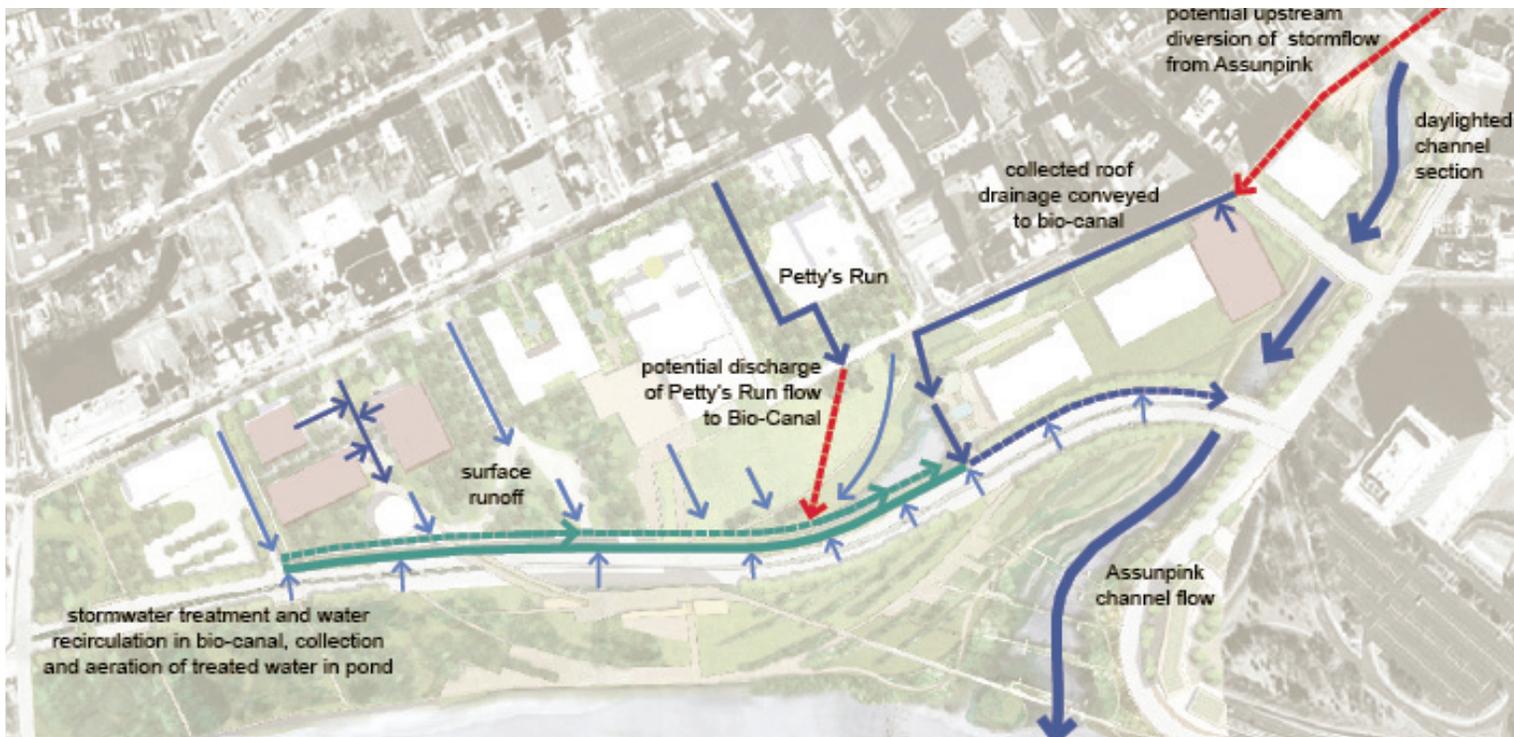
The bio-canal is located along the northeast side of Route 29 between the boulevard and the garage/proposed buildings. It will capture stormwater runoff from the adjacent buildings and the boulevard and filter it in a shallow channel lined with emergent and aquatic plants. The plants will remove sediment and volatile organic compounds from the water and allow it to pass through to the aeration fountain at the Common.

- Create a new bio-canal and fountain to clean stormwater and provide visual interest.
- Create a linear watercourse supplied by runoff and lined with water-tolerant biofiltering plants, to capture and purify urban stormwater runoff from the capital core and the boulevard,.
- Extend the channel from Calhoun Street to the Common, terminating in the Common aeration fountain.
- Design the channel as an urban amenity, with attention to the extent and composition of biofiltration plantings as design features.

The river, creek, and canal form the structure of the water system. Petty's Run, the Bio-canal, and Fountain and Plaza pool help to tell the heritage story, filter urban stormwater, and provide visual interest in the capital core.



Strata Center at M.I.T., Design by Olin Partnership



#### Bio-Canal Diagram

Stormwater from the Capitol Complex is collected and diverted to the Bio-Canal, which provides filtration and storage. After treatment, the water is discharged to the Assunpink Creek and Delaware River.

## The Assunpink

The Assunpink will become a linear park system along three blocks of the creek that will allow for pedestrian access, passive recreation, historic interpretation, stormwater quality enhancement, and ecological restoration. A pedestrian/bike connection at water level from Mill Hill Park to the river will enable park users to get to the river easily without the conflict of crossing streets. The trail will also connect three new park areas along the creek to Mill Hill Park.

In support of the Olmsted Assunpink Creek Greenway proposal, the Trenton Open Space Master Plan, and the city's current efforts upstream, Capital Park administrators should be advocates for extension of the park system upstream beyond Mill Hill Park to the train station and continuing into neighboring Mercer County municipalities.

## Assunpink Park

### Create Assunpink Park along its three-block length: Bridge, Hotel and Confluence.

Assunpink Park will improve the environment of the creek and provide public access and heritage interpretation from Mill Hill Park to the Delaware River. The creek has been culverted, channelized and forgotten. The park will provide the opportunity to restore the creek, to improve its ecological function, and to make it a visual and recreational amenity.

### South Broad Street Bridge Block

The narrow space of the South Broad Street Bridge Block and its extremely urban context have shaped the proposed plan as an exciting and active green plaza. New water level walkways, green terraces, and interpreted mill ruins will create a lively and engaging space that will invite people to Capital Park and enable them to connect to the river.

To make this possible, the existing concrete box culvert will be removed in its entirety. From South Broad Street to South Warren Street the Assunpink Creek is in a concrete box culvert, the top of which is collapsing. As a part of Releasing the Assunpink, the concrete box culvert will be removed and the stream channel designed to be a free-flowing watercourse with sloping, terraced sides and a natural surfaced bottom with step falls to create pools and provide aeration. The South Broad Street Bridge will be restored and preserved as a landmark

structure. Its structural capacity and integrity will be studied to determine the best solution to long-term stabilization of the modern roadway.

The bridge is important due to its place in Trenton's history as a Native American crossing, a Colonial road crossing (the first crossing upstream from the confluence with the Delaware River), the site of the Second Battle of Trenton, and a key milling site.

The creek was a focus of Trenton's early industry, which harnessed the creek's power for milling operations of varying types. The mill ruins will be studied for archaeological potential and interpreted as part of the story of the creek.

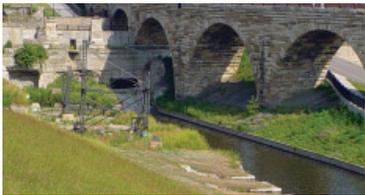


### Assunpink Culvert

The culvert that contains the Assunpink Creek which runs behind Capital Place One is collapsing and requires removal. This is also a chance to daylight the stream.

### Open the Assunpink Culvert

The box culvert containing the Assunpink Creek should be removed in its entirety from South Warren Street to South Broad Street and restored as a free-flowing watercourse. Three goals of this effort are to restore to some degree the ecological function of the creek, to conserve and interpret the cultural heritage of the creek's milling district, and to improve the visual appearance and recreational experience of the space.



#### Precedents for Petty's Run

Mill Ruins Park, Minneapolis, Minnesota  
(WRT)



The USACE has prepared an Environmental Assessment of the effects of resolving this condition. Four action alternatives to solve the problem were studied. All options remove the top of the culvert.

Alternatives include leaving the sides of the culvert and removing one side, both sides, or both sides and the bottom. The Capital Park team recommends #4, to remove the entire structure and slope the surface to the creek. (*Environmental Restoration Report and Environmental Assessment Lower Assunpink Creek Ecosystem Restoration Project - Broad Street Culvert March 2007, CH2M Hill*)

Current park design concepts for the culvert block include a more urban image than that shown in the USACE EA. The master plan recommendation differs in three ways:

- Instead of a sloped and fully naturalized edge, create level terraces (some paved and some planted), for use by pedestrians
- Investigate and excavate in part the remnant mill foundations for interpretation
- Excavate and restore the South Broad Street Bridge.

### Reclaim the South Broad Street Bridge

Determine the best way to preserve the bridge and excavate it from the fill that has been placed against its upstream and downstream faces. NJDOT is studying options for how to relieve the negative effects of roadway structural loading on the historic bridge by using concrete beams to reduce the pressure on the bridge. This project should be considered first as a historic preservation project and the structural design should serve the dual purposes of preservation and traffic engineering.

The major actions for the bridge are to:

- Excavate and stabilize/restore the historic bridge structure.
- Open the second arch of the bridge that was used as a mill race, and create a pedestrian underpass beneath Broad Street.
- Explore ways to evoke the mill race that supplied water to the mills downstream.
- Coordinate the structural treatment of the bridge to accommodate modern traffic loads.

### Draw on the creek's industrial heritage to create a place-based design and interpretive program

The Assunpink Creek was once the industrial center of the city, drawing on water power for milling and manufacturing. The following actions will highlight this historic function:

Excavate, stabilize and interpret all or some part of the ruins of the McCall Paper Mill, Eagle Factory, Trenton Cotton Factory, and Moore Flour Mill along the creek.

- Use the ruins to create rooms within the park for interpretation. These spaces may be terraced to allow for seating and gathering.



### South Broad Street Bridge Sections

The South Broad Street Bridge will be restored as a focal point along the Assunpink Creek. Carving back the banks of the stream provides access to the water and greater flood storage capacity. The abandoned mill race which runs through a second, buried arch could become a new pedestrian and bicycle underpass. The ruins of the Trenton Mills and other mill buildings will be used to interpret the industrial history of the Assunpink.

### The Hotel Block Park

The hotel block park is the important transitional space between the Bridge Block and the Confluence. It is currently a very narrow space densely wooded and all but lost to urban view. At present there is no impetus to change the conditions within the creek valley. The street-level landscapes will be improved to harmonize with the adjacent parks. Improved sidewalks and terraces will enhance the pedestrian experience along this block. Historic site features, such as the abutments of the

former Trenton Water Power, could also be featured in development of this section for the park. These abutments are present up to the edge of the creek.



#### Pedestrian Underpass

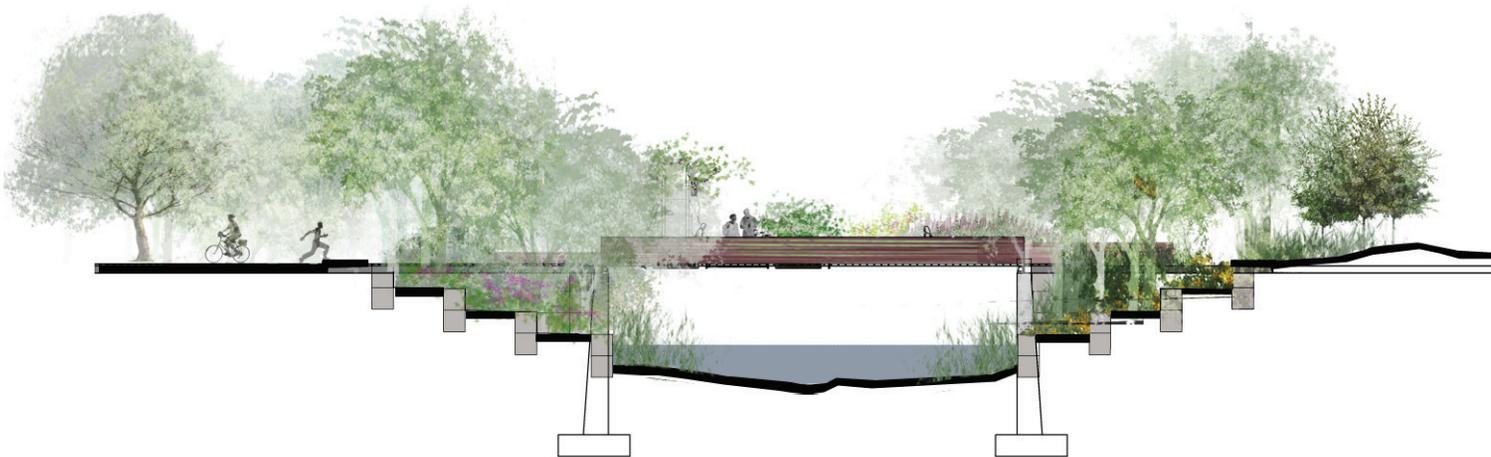
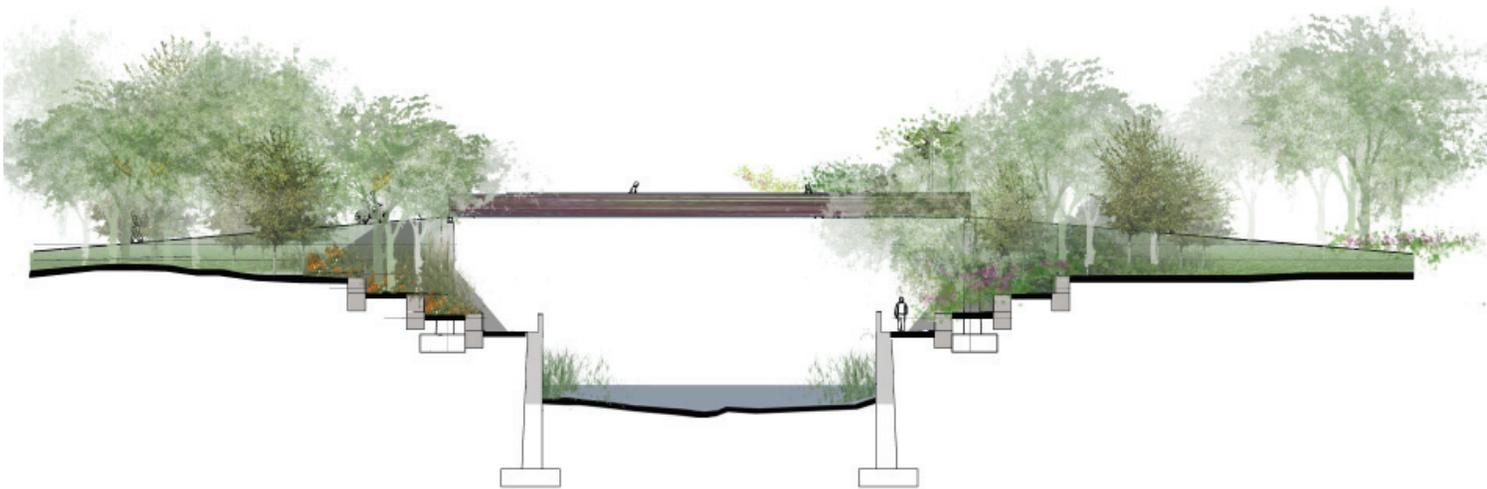
The Assunpink Greenway trail will pass underneath road crossings. These underpasses can be designed to be attractive, with bright lighting and high quality materials. These precedent images are from a similar bridge underpass in Boulder, Colorado.

The Hotel Block is the only area along the creek that will preclude pedestrian access along the creek below street level. In the absence of external forces that would dictate removal of the existing trees and regrading the bank edges, the woodland fringe and extremely steep banks will remain in place. For the Hotel Block, there are three options: preserve the cross section as is, or preserve the north side while terracing the south side for a walkway, or terrace both sides. Any terracing will likely result in removal of all or most of the existing vegetation. If there is a need to regrade the banks, especially the south bank, for utility construction, bank stabilization or other cause, the possibility of a

continuation of the confluence and bridge block water level pedestrian route should be considered. This would result in terracing and replanting the creek banks, and making the hotel block into a park more visually comparable to the terraced bridge block.

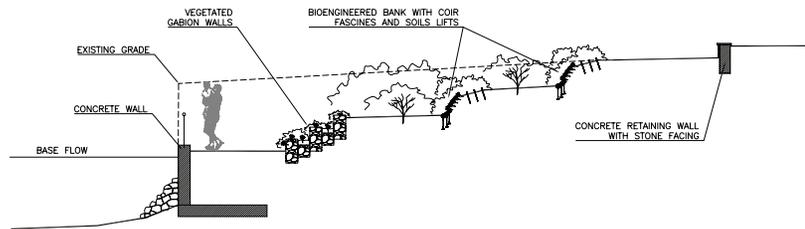
- At present it is recommended that the creek walk connection be located at street level in this block. If future projects impact the creek edge in this area, and/or if the Warren Street Bridge is reconstructed, it is recommended that the water level walkway be explored as described below.
- Explore a water-level walk on the south side, and study the feasibility of an underpass below South Warren Street and the proposed Route 29 Bridges. Constraining factors that affect the feasibility of a water-level walkway are the frequency and extent of inundation, the ability to build without obstructing water flow, and the ruins of the abutments of the Trenton Water Power aqueduct over the Assunpink (which would require a cantilevered walkway to circumvent). Options for accommodating the path below South Warren Street bridge include:
  - Build the walkway out into the creek area in the area beneath the bridge and along the south side stone wall.
  - Await the need to replace the Warren Street Bridge, and then widen the span to allow for a pedestrian trail outside of the creek area.
  - Remove the stone wall, and excavate and rebuild it farther to the south to accommodate the path outside the creek area.

**Pedestrian/bicyclist routes along the river, creek, canal, bridges, major streets, and through parks re-connect Trenton.**



#### **Garden Bridges Over the Assunpink**

The Route 29 bridges will be modified and recycled as garden bridges. The existing girders will be reused, possibly on new abutments, to provide a unique landscape connection across the mouth of the Assunpink. The new bridges may be lowered to provide a more level crossing, or a sloping landscape will provide access to the present elevation. A reinforced bank will provide protection against scouring and a place for riparian plants.



### River Bank Stabilization

The river edge can be designed using a variety of solutions. Planted gabion walls provide a structural stone edge that supports plant life. Concrete bulkheads, with or without stone facing, can provide a strong edge that can also be accessible to pedestrians.



### The Confluence Garden

The confluence is a nexus of pedestrian routes. The highway bridges will be a focal point and the primary creek crossing point along the entire Trenton riverfront. The bridges will carry the riverfront trail. Creek paths will connect from the riverfront to the creek on both sides of the creek. A bridge garden terrace on the north side will be a gathering place and a focal point for exploration of the confluence.

Create Confluence Park by removing or drastically reducing the height of the concrete bulkheads, terracing the bank, and retaining all or some of the abandoned highway bridges as pedestrian bridges and hanging gardens.

Four bridges cross the creek: two mainline bridges cross at an upper level and on the outside of those bridges two outer ramp bridges cross at a lower level. Once the four bridges are abandoned when the boulevard and its creek bridges are built, their parapet walls and deck will be removed and reused in whole or part.

The design treatment of the bridges will be to construct pedestrian decks and planters between and/or on the exposed beams. Some beams will be removed to reduce the expanses of the bridge surface.

The two main line bridges are some ten feet higher than the ramp bridges and currently are accessed via long, ramped earth fills. These ramped fill areas will be removed when the boulevard is built, rendering the bridges inaccessible and structurally unstable. The bridges will be

disassembled, the concrete abutment walls cut down approximately to park grade, and the beams replaced according to the final design.

Both sides of the creek are currently bulkheaded by massive concrete walls approximately fifteen feet high. The north side wall extends 800'—approximately 300' along the river and 500' along the creek. The south side wall extends approximately 2,500' – 2000' along the river and 500' along the creek. The bulkhead height prevents any access to the creek and severs the typically rich ecological function of the riparian edge.

The plan recommends removing all or a large part of the walls and terracing or sloping the new soil profile. This will expand the volume of the floodplain and, coupled with the removal of the earthen embankments of existing Route 29, should substantially reduce flood



### Garden Bridges at the Confluence

The confluence of the Assumpink with the Delaware will be a special place. The Route 29 bridge structural elements are reused as “stitches” across the Assumpink, connecting the north and south riverfronts. The bridges are planted as hanging gardens over the water, creating a unique attraction. The concrete walls of the Assumpink channel are replaced with a planted structural bank that provides improved habitat and a lush landscape.



volume in the immediate area. This may allow a tradeoff between the highway removal and floodplain fill required for neighborhood construction.

Upon removal of all or some of the bulkhead, the tapered/terraced slope will be protected from erosion by some form of erosion proof/resistant treatment in three prototypical conditions. An “urban access” (hard surface) condition will be used in some areas that allows pedestrian



access to the water level. A “transitional condition” will use plants and structural terracing for slopes. A “natural condition” will use plants to anchor earth slopes. A very diverse range of

floodplain and riparian plants will give the confluence a rich and textured image.

Due to the flow volumes, velocities, heights, frequency, and winter ice conditions, any replacement of the bulkhead will require thorough analysis. Provisionally until verification, a hybrid approach is recommended using some combination of bioengineering and structural materials such as gabions. The exact locations of these conditions are subject to verification pending detailed engineering analysis in coordination with USACE and NJDOT.

### Delaware River Bulkhead

A concrete bulkhead dating from the construction of Stacy Park lines the Delaware River bank.

### Assunpink Greenway Extension

The creek corridor and pedestrian circulation between Mill Hill Park and the train station should be examined for the opportunity to daylight the culverted creek and create a clear and direct pedestrian route from the train station to the river. Releasing the Assunpink is a part of a larger regional watershed restoration plan that is proceeding upstream. The City of Trenton has made improvements and is planning more along the creek beyond the city limits. The Assunpink Watershed Association, Mercer County, and others are restoring parts of the upstream areas. Actions recommended by the park plan include:

- Advocate a fully connected greenway system from the Confluence to the train station and beyond, into neighboring municipalities in the county.
- Support plans to redesign, reduce and simplify the Route 1 / Market Street interchange area to allow for a safe, convenient, and attractive pedestrian path from the station to the river.
- Daylight the culverted segment of the creek between Mill Hill and the station, if only as a more urbanized channel, to restore the continuity of the greenway and to enhance the ecological potential of the creek.

### About the Lower Assunpink Riverfront Neighborhood

Re-Casting Trenton builds on the plans of the City and the Capital City Redevelopment Corporation for the proposed Lower Assunpink riverfront neighborhood. The immediate adjacency of the neighborhood and park require close coordination on the design of the Assunpink and especially the south riverfront park. The current neighborhood master plan lays out a street grid that forms the edges of the park, providing a framework for the open space.

- The William Trent House should be clearly linked to the park.
- Sustainable development principles of NJDEP's guidelines should be applied to the development. These include urban stormwater filtration and harvesting and other actions.
- Urban design should be coordinated with the park so that street level uses and physical development guidelines reinforce the objectives of a walkable, green neighborhood.



### Lower Assunpink Riverfront Neighborhood and Capital Park

The lands owned by the state and city south of the Assunpink confluence are proposed for redevelopment as a mixed use district. The waterfront park will be an extension of the landscape of Capital Park to the Three Bridges.

## **Re-Casting Trenton: A Systems Viewpoint**

The features of Re-Casting Trenton are disassembled to capture the sequence of fundamental features that provide context for and define Capital Park. Thought of as systems linked in a linked network of actions, they provide the conceptual unity that will pull together the disparate parts of the present-day downtown waterfront.

## Mobility System

A walkable city is where people want to be. It is a city whose culture, history, commerce, and environment are linked in a way that creates a sense of place where walking is easy and natural. In the 21st Century, one of the chief competitive advantages of cities is their walkability, which is a chief indicator of quality of life.

Few cities can boast the tremendous natural and cultural resources that Trenton has inherited. As a river city, Trenton has tremendous potential to benefit from its natural resources. As a state capital, it is a natural seat of state identity and pride. As a historical center, it offers a rich array of destinations for learning about the origins of the American way of life. And as a cultural hub, it offers the region a wide variety of amenities and attractions.

There is much advantage to be had by linking these assets into a network used by residents, employees, and visitors to Trenton. Creating a connected Trenton will allow for increased economic activity from increased tourism, better advantage in attracting and retaining businesses, and a better quality of life for residents.

The Capital Park plan proposes a network of connections that tie the park to the cultural destinations in central Trenton and integrate with the regional transportation and trail system. The park contains layers of connections for pedestrians, bicycles, automobiles, and transit. Some of these connections can be created by the park itself, and others will entail

a larger cooperative effort between the state, the city, the county, and the federal government. For example, the park plan assumes that Route 29 will be replaced with an urban boulevard as planned, which greatly improves access for all travel modes. The entire network will not come to pass overnight, but by steadily implementing the plan, the city will be tied together, bringing its assets within reach of all its residents and visitors.

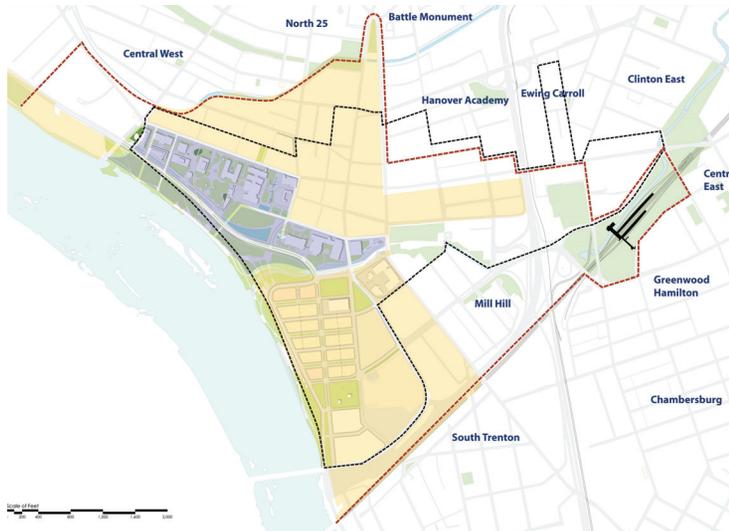
**The project is predicated on the conviction that the capital city's riverfront should be for pedestrians, not vehicles.**

**Jurisdiction Map**

Several organizations serve the study area, including the Trenton Downtown Association and the Capital City Redevelopment Corporation. Many neighborhoods are within a short distance of Capital Park.

**Legend**

- TDA Special Improvement District Boundary
- CCRC District Boundary
- Capital Park
- Capital Core



**Pedestrian Network**

Capital Park is connected to the canal paths, Assunpink Greenway, and waterfront walkways that provide connections to the region. An integrated street network provides good connectivity in central Trenton.

**Legend**

- Regional Connections
- Neighborhood Connections
- Route 29 Re-Alignment



**Pedestrian and Bicyclist Circulation**

Improved pedestrian circulation is the heart of the park plan. Pedestrian movement is given maximum priority between the various precincts of the park and among the cultural and heritage destinations in Trenton. The pedestrian network is both local and regional in scope, providing access to a wide variety of users and destinations.

**Regional Pedestrian and Bicycle Connections**

The park is a crossroads of the regional network of greenways, canal paths, and trails. The park plan ties existing and proposed paths together so that users can easily travel between different trail networks. The major connections are as follows:

- The park is connected to the D&R Canal via Calhoun Street, Willow Street, North Warren Street, and North Broad Street.
- The park is on the East Coast Greenway trail that connects Florida to Maine. A shared use path parallel to Calhoun Street, running from the D&R canal to Calhoun Street Bridge, is proposed through the park.
- The park is an important link on a future waterfront trail on the Delaware River. This trail could continue south to Bordentown and beyond.
- The park is connected via the Calhoun Street Bridge to the Delaware River Canal Path in Pennsylvania.

- The “Trenton Makes” Bridge provides a pedestrian connection to Morrisville. A path along the levee in Morrisville connects this bridge to the Calhoun Street Bridge, forming a waterfront trail loop.
- The Assunpink Greenway provides a regional connection through Mercer County. The greenway should be connected to the D&R Canal path in the vicinity of the US 1/Whitehead Road interchange. The greenway is a cooperative effort of the City of Trenton, the U.S. Army Corps of Engineers, and Mercer County.
- The pedestrian environment on Green’s Place, Taylor Place, and Capitol Street should be upgraded to create strong pedestrian connections from West Hanover Street to West State Street and the park.

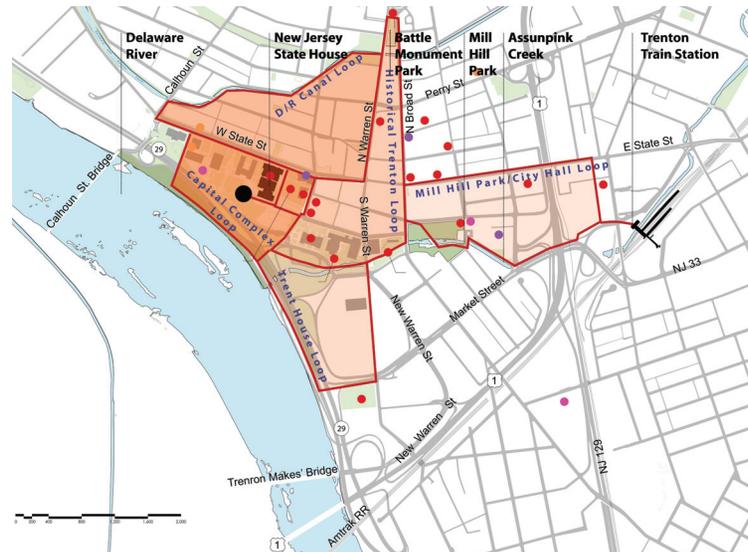


**Activity Nodes**

The pedestrian network connects activity nodes within Capital Park

**Connecting to Trenton Destinations**

The Visitors Center in Capital Park can serve as a jumping off point for a number of itineraries for Trenton visitors. The center can provide suggested routes for different themes, such as historical walks lasting different amounts of time depending on how much time a visitor might wish to spend. Creating a system of interconnected loop trails allows many options for exploring downtown Trenton.



**Trail Loops**

A system of loop trails provides multiple itineraries for walkers to explore the attractions in Trenton.

**The park is connected to:**

- **The Battle Monument** is accessed from the park in three possible ways: via Warren Street, via Broad Street, or via the D&R Canal Path/ East Coast Greenway. Wayfinding signs and streetscape upgrades are necessary to reinforce this connection.

**Legend**

— Potential Cultural Trails

**Places of Interest**

- Visitors Center
- Civic / Historical
- Educational
- Entertainment
- Museums

- **The William Trent House** is connected to the park via a proposed bicycle trail along the riverfront that leads to William Trent Place, accessing the historic site.
- **The State Street Corridor** is the commercial and civic spine of downtown. The park connects to West State Street via access routes spaced regularly throughout the Capital Complex.
- **The Roebling Complex** is connected to the park via South Broad Street. Pedestrian facilities along South Broad should be upgraded to form a great walking street that leads from the park to this important shopping and entertainment cluster.
- **South Riverwalk Park** can be reached via the extension of the riverfront path south.
- **Stacy Park** can be reached by a shared use path going north along the new Route 29 boulevard.



#### Creating a Heritage Trail

The Freedom Trail in Boston is an example of marking a trail in an urban environment. A red line threads through the city connecting many of the sites of the American Revolution in Boston.

#### Heritage Trail

A heritage trail is proposed as a route that connects the major historical destinations in the city. For example, Boston has the Freedom Trail, which is visited by many thousands of tourists each year and connects important Colonial era sites. Trenton is a central location and a potential starting place to visit places of interest that were part of the American Revolution within the recently declared Crossroads of the American Revolution National Heritage Area. Capital Park and the proposed heritage area provides an opportunity to inform and interpret places of

interest within Trenton as well as other historical attractions in the city into one visitor itinerary.

The proposed heritage trail will connect:

- Revolutionary War battlefields, such as South Broad Street Bridge/Mill Hill Park and the Battle Monument.
- Historic sites, such as the William Trent House, the Old Barracks, the Friends Meeting House.
- Civic institutions, such as the State House and Trenton City Hall.

#### Interim Waterfront Access

Route 29 is currently a barrier that prevents pedestrian access to the Delaware River. This problem cannot be fully remedied until Route 29 is reconstructed as an urban boulevard. In the interim, however, it may be possible to create a temporary bicycle/walking loop path along the waterfront connecting Calhoun Street to Memorial Drive. The interim trail can be created as follows:

- A path can be constructed along the south side of Calhoun Street from State Street to the riverfront. Where this path crosses the ramps leading to and from Route 29, a temporary raised crosswalk would be constructed for safety purposes and curve geometry would be tightened as necessary to reduce motorist merging speeds.
- The southernmost lane of the Calhoun Street/Route 29 overpass could be converted into a temporary bike and walking trail. A concrete barrier would separate the existing lane from traffic.

- The trail would cross the ramp leading from the Calhoun Street bridge to southbound Route 29. This ramp has a wide lane and shoulder. A concrete barrier could be placed to create a bike path that follows the ramp to the grade of Route 29.
- A new, temporary waterfront access trail could be constructed parallel to Route 29 along the riverfront between the Calhoun Street on-ramp and the Memorial Drive off-ramp.
- Route 29 Southbound cannot currently be crossed by pedestrians at grade because it is a freeway. In order for the trail to reach Memorial Drive, a crossing is needed in the vicinity of the Memorial Drive off-ramp to southbound Route 29. Such a crossing will require a traffic signal to allow for pedestrians to cross Route 29. Crossing signals already exist on Route 29 both south and north of this section of roadway; however, current traffic speeds in this section of roadway are too high for a signal to be safely installed. Travel speeds can be reduced by using concrete barriers and other devices to create geometrics that require motorists to slow down, similar to measures taken in construction zones. These can be combined with warning signals and other measures to alert motorists to the stop light. The stop light would be activated by a push button provided for pedestrians.
- The path would pass under northbound Route 29 by following the off-ramp to Memorial Drive that passes under the roadway. The path would then connect to the traffic roundabout to be installed at the foot of Barrack Street.

### On-Street Bicycle Facilities Plan

The plan includes a bicycle network that will be useful for both commuters and recreational riders. A combination of on-street facilities and off-street paths will connect the destinations within Trenton and beyond to regional bicycle trails.

Streets with low traffic volumes and speeds do not require dedicated bicycle facilities. Bicycle routes with greater traffic volumes and high speeds require bicycle facilities. There are generally two types of facilities to consider on-street: bike lanes and “sharrows.” Bike lanes are typically four to six feet wide lanes reserved for bicycles, and can be separated from vehicle lanes via striping. Sometimes bike lanes are demarcated with an application of a solid color, such as green, blue, or red for greater visibility and to help with enforcement. “Sharrows” are simply stencils of a bike with directional arrows that are striped in a general travel lane when a bike lane is not deemed necessary, or where insufficient space exists. The stencil helps to establish the legitimacy of bicycles as part of the general traffic stream and serves as a reminder to motorists and bicycles of the correct place to ride within the roadway.

The following steps should be taken to improve on-street bicycle facilities leading to the park:

- Extend the existing bike lanes along Market Street to the waterfront.
- Install bike lanes or sharrows on Broad Street.

**The State House, Cultural Complex, War Memorial, Old Barracks, Battle Monument, William Trent House, and proposed South Broad Street Bridge rehabilitation make up the core landmarks and heritage visitor attractions of the Capital Park**

- Install bike lanes or sharrows on Warren Street, north of Assunpink Creek.
- Install bike lanes or sharrows on William Trent Place, extending under Route 1.
- Install bike lanes or sharrows on Barrack Street, from Route 29 to the Delaware and Raritan Canal. These might need to be coordinated with a possible River Line alignment.
- Install bike lanes or sharrows on Lafayette and East Front Street, connecting to City Hall and the Train Station. These might need to be coordinated with a possible River Line alignment.
- During the planning process, bike lanes on Route 29 were considered, an off-street path for bicycles for the section of Route 29 from Calhoun Street to Cass Street is recommended.
- Bike lanes were considered on West State Street, but given the commercial nature of the street and relatively low vehicle speeds, any extra space is recommended to be added to the sidewalk area.

#### Off-street Bicycle Facilities

Many bicyclists prefer to ride on off-street paths away from vehicle traffic. In other cases, off-street paths can serve the dual purposes of recreational and work travel via bicycle. The plan includes the following recommendations for the off-street bicycle network surrounding the park:

- The Assunpink Greenway is a major corridor that can extend for miles beyond the park. The Greenway should be directly connected to

the Delaware and Raritan Canal to create a triangular loop through Trenton with three legs: the D&R Canal Path, the Riverfront Trail, and the Assunpink Greenway.

- Create a continuous path along the Delaware River, connecting to the remaining portion of Stacy Park to the north and Waterfront Park to the south. The minimum width should be twelve feet to accommodate the expected user volume. In the northern section this path would be placed just to the west of Route 29, coordinated with the sidewalk. At a point in the park the path would diverge from Route 29 and then cross the Assunpink Creek via a bicycle/pedestrian bridge, connecting to a path alongside the waterfront street in the redevelopment area. It would then rejoin Route 29 just to the north of the Trenton Makes Bridge and continue to the south.
- Extend the existing path on the northwest side of the Calhoun Street bridge along the relocated Calhoun Street to the existing path alongside the Delaware and Raritan Canal. This path will serve as a link in the East Coast Greenway. The existing path on the north side of the “Trenton Makes” bridge would extend along New Warren Street to William Trent Place, where it would link to the proposed bike lanes on that street. Where the waterfront path passes under bridges, a series of ramps should connect from the riverfront path to the bridges. A bike path should be constructed that connects the D&R Canal path to the waterfront, following an alignment to the west of the State Museum. This route will also create a new crossing on West State Street.

- Create a path along the northern bank of the Assunpink Creek linking the waterfront path to Mill Hill Park, the train station and beyond. This path would pass under Route 29 and cross South Warren and South Broad Streets at-grade. It would also connect to the proposed intersection at Route 29 and Memorial Drive.
- Extend the path alongside the Market Street upland to South Broad Street, where it would tie into the proposed bike lanes on that street.
- Create a path mid-block extending William Trent Place to the South Warren Street bridge over the Assunpink Creek. This path would link the proposed bike lanes on William Trent Place to those on South Warren Street.
- All off-street paths should be Shared-use Paths (SUP) open to all non-motorized traffic: cyclists, pedestrians, skaters, etc.

Paths should be designed with geometrics favorable for safe bicycle use and ease of maintenance. Generally, bicycle paths must be designed to allow for work vehicles, such as pick-up trucks, to use the path.

Pedestrian crossings would be designed into the roundabout to reach the park.

The highway, railings, walls, fences, and parking lots that block people from the river will be reduced, minimized, or eliminated altogether.

**Circulation Plan**

An interconnected street system provides intuitive, direct vehicular circulation. New traffic signals and crosswalks provide pedestrian connectivity. Multi-use trails provide convenient regional bikeways, while bike lanes and sharrows accommodate bicycle movement on local streets. The potential extension of the River Line provides rail transit connections to the region.



**Legend**

- Re-aligned Route 29
- New Traffic Signals
- Existing Traffic Signals
- New Crosswalks
- Bike Paths
- Bike Lane/Sharrows
- LRT - River Line
- LRT - River Line Station

## Vehicular Circulation

The vehicle circulation plan creates an easy-to-navigate system of roads and streets for automobiles and transit. While the plan assumes that Route 29 will be converted to an urban boulevard, an interim access plan is proposed for the short term. The plan includes recommended locations for traffic signals, new streets, and conversion from one-way to two-way operations. Bus loading areas and transit routes are also proposed.

### Major recommendations are:

- Convert Route 29 from an expressway to an urban boulevard with on-street parking.
  - Extend Barrack Street to Memorial Drive and Route 29.
  - Create a new street between the Department of State building and the auditorium to connect Route 29 and West State Street.
  - Create a roundabout for interim access to Route 29 from Memorial Drive as discussed below.
  - Replace the Calhoun Street overpass with an at-grade urban intersection.
  - Convert downtown Trenton streets to two-way, including North and South Warren and North and South Broad Streets to simplify circulation.
  - To ensure good connectivity, pedestrian crossings are needed every 300 feet on commercial streets and every 500 feet elsewhere. A pedestrian crossing can be a signalized intersection, a mid-block crosswalk with signal, an unsignalized crossing on low-speed and low-volume streets or in places with a median refuge, a bridge or tunnel, etc. Crossings should be located where people will use them and coordinated with other walking infrastructure. Delay is a key influence on walking behavior and should be minimized.
- On West State Street there are signals at Calhoun and Barrack Streets, between which lies a 2,000 foot long stretch, which suggests the need for six crossing locations. Currently, this length of roadway contains two unsignalized crosswalks. The plan proposes signalized crossings to the west of the State Museum (at the waterfront-canal path discussed above), at the entrance to the park, and in front of the State House. Between the signals, marked crosswalks with curb extensions and refuge islands should be provided.
  - Provide a mid-block crossing on West Lafayette Street between Barrack and South Warren Streets, and between South Warren and South Broad Streets.
  - Create a signalized crossing on Route 29 below the State House, aligned with the waterside paths and access to the State House Garage.
  - Create a signalized intersection at the intersection of Barrack Street and Memorial Drive/Route 29.
  - Provide signals at all the intersections on Route 29 within the Market Street Development Area.

### Temporary Roundabout

A temporary roundabout at Barrack Street and Memorial Drive provides access to Capital Park. When Route 29 is converted into a boulevard, the roundabout will be removed.



- Provide new signalized intersections on South Warren, South Broad, and Market Streets where new streets intersect. Where interior streets meet, all-way stops should be provided.
- Place mid-block crossings on the riverfront street and elsewhere where there are mid-block passages and/or blocks longer than 500 feet.
- Study West Front Street for conversion to two-way operation to improve circulation.
- Place an all-way stop at the intersection of West Front Street and Barrack Street to provide for pedestrian crossing and two-way operation.

### Interim Route 29 Access

Capital Park is likely to open before Route 29 is fully converted to a boulevard. As a temporary measure, access from Route 29 should be upgraded at the War Memorial exit. The current highway ramps create a confusing and convoluted system that directs traffic away from the park and the area of the proposed Visitors Center.

During the plan development phase, the park planning team participated in a design charrette with NJDOT and its consultants to explore options for early action improvements to Route 29. At the charrette, a design concept was proposed to improve access to Route 29 to and from Memorial Drive and Barrack Street.

The interim access concept proposes that a temporary roundabout be constructed at the Memorial Drive interchange on Route 29. Barrack Street would be extended to meet this roundabout. This will allow motorists leaving Route 29 to access the State House Garage for convenient parking for the State Capitol Complex, the War Memorial, and other tourist attractions, as well as to use Barrack Street to reach downtown Trenton. The roundabout creates a safe way to tie these various streets together without the need for traffic lights.

When Route 29 is rebuilt as an urban boulevard, this roundabout would be replaced with a standard three-way intersection with a traffic signal.

### Tour Bus Access

Tour buses deliver many visitors to the State Capitol Complex. Loading and parking of tour buses should be managed as follows:

- Establish bus loading zones on State Street, Barrack Street, and the Route 29 boulevard. Bus loading zones should permit 10-minute parking to load and unload passengers and be reserved for buses only.
- Establish a drop-off loop at the corner of Barrack and West Lafayette Streets.
- Establish a bus parking lot off-site at the corner of West Hanover Street and North Willow Street or a similar location. Additional bus parking might be accommodated at the Sovereign Bank Arena or the Waterfront Park baseball stadium. Create maps and web information to direct bus drivers to the staging area.

### Bus Transit Routes

Trenton is well served by existing New Jersey Transit routes. The park can be accessed from routes running on State, Broad, and Warren Streets. Recommendations for the bus system are as follows:

- Produce and install bus maps of Trenton at transit stops and have the maps available at the Visitors Center, hotels, drug stores, and other outlets.
- Install bus schedules at transit stops.
- Evaluate a new route that runs along the new Route 29 boulevard and connects to Market Street and the train station.



### Bus Loading and Staging

Bus loading zones are located on the perimeter of the State Capitol Complex. Buses are then directed to a staging area, the preferred location of which is at the intersection of North Willow and West Hanover Streets.

To ensure good connectivity between the train station and the development area, which would support the park site as transit-oriented development, Market Street transit routes (604, 611, SEPTA 127) should be restructured to provide frequent and consistent service similar to the Capital Connection on State Street. These routes (or new routes) could also link to the southern park edge (across the Assunpink) via the new Route 29, running from there to the Capitol area and beyond.

### Extending the River Line

The River Line light rail has been studied for extension to the state capitol via Clinton Avenue and State Street. Extension of the line would allow for a one-seat ride from the River Line communities to the business district of Trenton. Currently, passengers wishing to reach central Trenton must

transfer to a bus at the train station. This contrasts with the River Line design in Camden, where the light rail operates on downtown streets to reach the waterfront attractions in that city.

New Jersey Transit prepared an Environmental Assessment for extension of the light rail line in 2001. The Capital Park consultant team was told during interviews that opposition exists to extending the light rail down West State Street. Therefore, the team developed alternative alignments to reach the State Capitol Complex. The consultants met with New Jersey Transit to discuss these alignments.

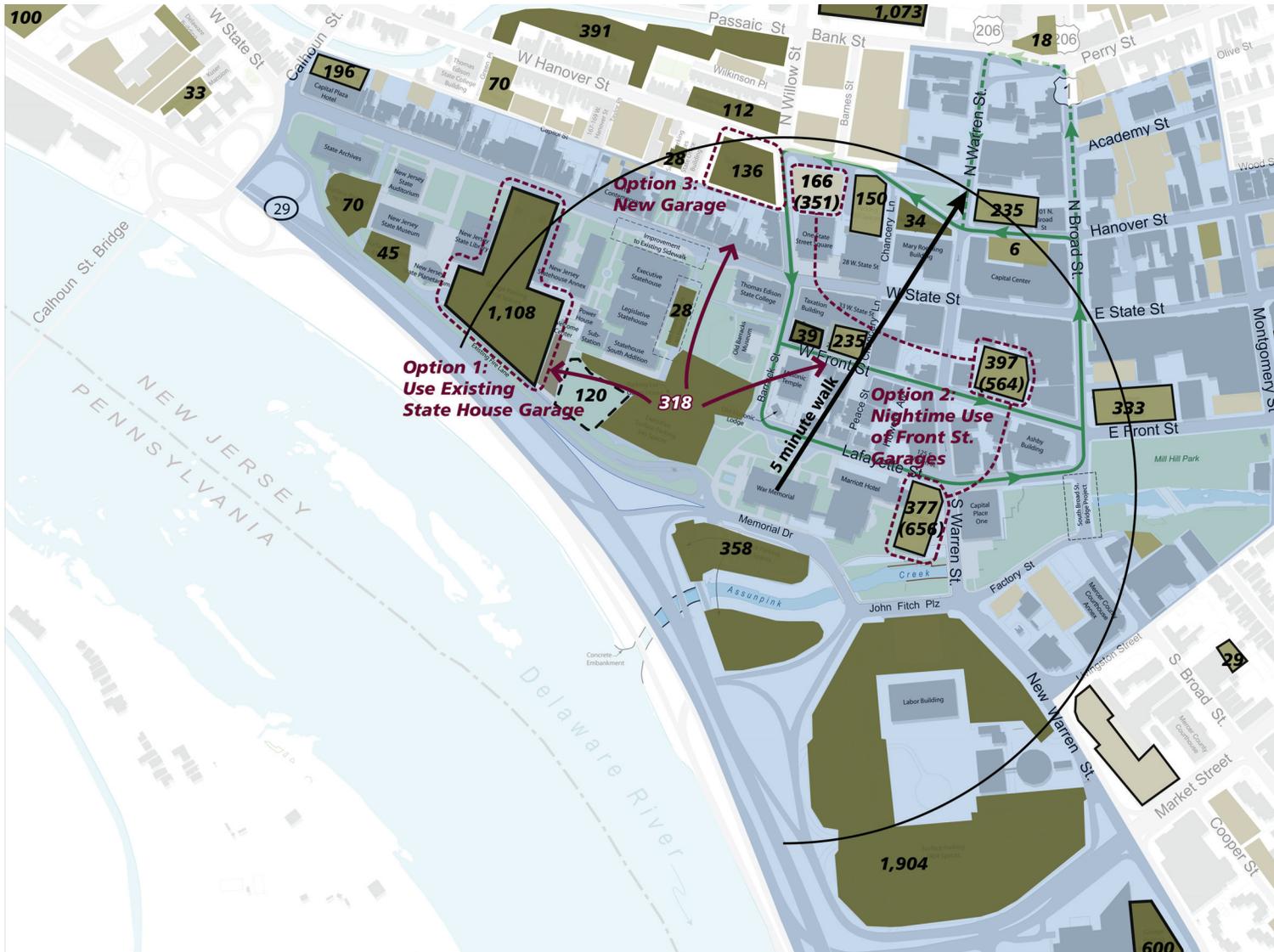
New Jersey Transit staff pointed out that the light rail project is in the long-range transportation plan for the region as prepared by the Delaware Valley Regional Planning Commission. It is not clear that the State Street alignment possesses any fatal flaws, although high costs are a deterrent. Therefore, the State Street option is probably still viable. New Jersey Transit was, however, interested in alternatives, such as an alignment using Lafayette Street instead of West State Street, or an alternative running down Market Street to Route 29 and then following Route 29 to Capital Park. New Jersey Transit officials also raised the question of long-term extensions to Ewing and the Mercer County Airport. Extension north of Trenton would likely follow Route 29, West State Street, or the partially abandoned Conrail right-of-way that runs past the New Jersey Department of Transportation headquarters.

The park plan is supportive of efforts to extend the River Line because this will provide greater accessibility to Capital Park and the State Capitol Complex. Because the alignment is not presently determined, the plan proposes the following strategy:

- Right-of-way should be reserved on three corridors pending further analysis: Market Street/Route 29; Front / Lafayette / Willow; and Clinton/State Street.
- Right-of-way for the potential extension to Ewing should be reserved.
- Geometric analysis should be undertaken to map the potential right-of-way of the River Line to understand the specific space requirements. Potential alignments for the River Line extension are shown in the Appendix.

### **Parking**

The goal of the parking plan is to provide convenient parking for visitors, tourists, and commuters. The creation of Capital Park will entail removal of much of the surface parking in the State Capitol Complex. This situation is not as dire as it first seems. The Trenton Parking Authority has some 500 unused spaces in its garages and lots on a daily basis. While lobbyists and other legislative session attendees have come to expect free parking at the State House, its availability nearby for a fee is a business opportunity for the TPA, City, private garage and lot owners.



**Parking Facilities**

The park plan requires relocating the parking area behind the State House. The parking will be moved into the State House Garage and other nearby garages.

**Legend**

- State owned surface parking
- State owned parking garage
- State leased surface parking
- State leased parking garage
- Other surface parking
- Other garage parking
- Parking catchment area
- 1,904** # of State parking spaces
- (20,000)** Total # of parking spaces

Off-street public parking in Trenton is not sufficiently visible, nor is it visitor-friendly. On-street parking is under-priced, resulting in its use by meter-feeding workers rather than visitors.

The master plan advocates:

- Establishing a downtown parking loop connecting major garages that is both well-signed and intuitive;
- Uniform posting of garage hours, rates and availability outside garages;
- Strategic use of parking pricing, policy and enforcement to promote on-street spaces for short-term use.

A key master plan concept is to recognize that parking facilities are used most efficiently when they serve multiple user groups who need parking at different times of the day. For example, concerts tend to occur after state business hours, so State parking could be used to provide concert parking. At present, the majority of parking in downtown Trenton is controlled by the State. Therefore, the State will be an essential player in opening up the parking supply to allow for greater use by visitors. Furthermore, the State should be a leader in managing demand for parking by employees as both an economic and environmental strategy. This practice, called Transportation Demand Management, is outlined in a section below. The following are recommendations for creating a coordinated parking plan:

- Establish an Office of Transportation Coordination that will assign parking to state employees, track parking utilization, and implement a Transportation Demand Management Program.
- Open the State House Garage to the public for evenings and weekends, particularly for War Memorial patrons.
- Work with the City of Trenton to manage downtown parking more efficiently:
  - Use parking pricing, policy, and enforcement to reserve on-street spaces for visitors, not commuters.
  - Create a parking benefit district where downtown parking revenue is captured and given to the Trenton Downtown Association for downtown capital projects and programs.
  - Establish a downtown parking loop connecting major public garages that is well signed and intuitive for visitors.
  - Extend garage hours into the late evening to accommodate tourists and shoppers.
  - Post garage hours, rates, and availability in a uniform way outside of garages.
  - Allow use of State parking for evening users.
  - Improve streetscapes leading from parking garages to major destinations

The table below shows the net change in parking supply that is caused by removing the existing surface parking lots. Parking supply in the long term remains relatively constant, assuming the construction of new facilities as part of any redevelopment projects. The specific strategy for each parking lot is described below:

### Parking Additions and Subtractions

Time Period	Parking Lot	# of Spaces ( ) denotes subtracted spaces
Short Term	State House surface parking lots(Areas 1 and 1A)	(317)
Short Term	Grass Parking Area	(120)
Short Term	New Visitor Drop-Off	12
Mid Term	War Memorial – Area 5 (North of Assunpink)	(125)
Mid Term	War Memorial – Area 5A (South of Assunpink)	(233)
Long Term	New Parking Garage on Department of Health and Agriculture site	350
Long Term	New On Street Parking	230
Long Term	New Parking Garage as Part of Calhoun Street New Development	350
Long Term	State Museum (Area 6A)	(45)
Long Term	Department of State (Area 4)	(70)
Net State Parking Change - Long-Term		30

### State House Surface Lot (Lots 1 and 1A, Including Grass Parking)

This lot is currently used by state employees, Capitol visitors, and War Memorial patrons. State employees already have assigned parking in other facilities, such as the State House Garage. Visitors will be directed to the State House Garage, the Marriott Garage, and other downtown parking facilities (including the West Front Street garage) via the parking loop as illustrated in the three parking strategies on page 117. War Memorial parking, which generally occurs on evenings and weekends, will primarily utilize the State House Garage and the Marriott Garage but may also use nearby downtown garages. In addition, the Route 29 project will offer new on-street parking.

### War Memorial/Assunpink Creek Lots 5 and 5A.

These lots are used by state employees and visitors to the War Memorial. The removal of these lots will occur when the Assunpink Greenway is developed and as the redevelopment of the Department of Health and Agriculture site happens. It is assumed that the proposed redevelopment project can provide a parking structure for state employees, allowing these surface lots to be closed.

These lots are also used for events at the War Memorial. There is a special concern about providing adequate handicapped parking and providing parking that is convenient for the demographic profile of symphony concert goers, who tend to be older and have less mobility. The plan proposes that most War Memorial patrons will utilize either the State House Garage or the Marriott Garage. Street parking that will be created through the Route 29 boulevard project can be reserved for

handicapped parking. Downtown parking garages also offer parking convenient to the War Memorial. The State Street Square garage might also be opened to the public for War Memorial events.

#### State Museum Parking (Lot 6A)

A small surface parking lot with 45 spaces exists adjacent to the State Museum. The Capital Park plan proposes that this lot be covered by a new deck that extends the terrace level landscape over the parking lot. State Capitol Complex loading docks would be located under this new deck, and a liner building built facing Route 29. The deck will entail removal of some parking, which would be relocated to the State House Garage, and the new garage created as part of the redevelopment area shown along Calhoun Street.

#### Department of State Building Lot (Area 4)

The Capital Park plan shows the potential for redevelopment of land currently occupied by the Calhoun Street interchange. This interchange is not necessary once Route 29 is converted to an urban boulevard. Returning Calhoun Street to its original straight configuration frees land for new development that could expand the state Capitol Complex. As part of this redevelopment, the existing surface parking on the west side of the Department of State building would be removed and accommodated in a new parking garage constructed as part of the development.

#### New On-Street Parking

The Capital Park plan includes new street segments that will have on-street parking. These include the extension of Barrack Street, the

redesign of Calhoun Street, a new street adjacent to the Department of State, and the Route 29 boulevard. Together, these street segments offer over 200 new on-street parking spaces within the State Capitol Complex.

#### Transportation Demand Management

Transportation Demand Management (TDM) is the practice of using market techniques to shift demand for transportation away from single occupant vehicles in favor of other travel modes. Such programs have benefits for air quality, congestion, and parking supply. Often, managing travel demand is far cheaper than investing in the facilities necessary to provide a parking space for every employee or visitor.

Many government agencies and state governments have successful TDM programs. An overview of case study TDM measures at other governments is included in the Appendix. Some version of the possible TDM programs such as Vanpool services, Transit Checks etc., are currently implemented by the State in Trenton. These programs need to be coordinated and aggressively marketed into a comprehensive TDM strategy for employees in Trenton. Additional TDM incentive program examples include:

- Free or discounted transit passes
- Parking “cash out” as a cash incentive to forego a parking space.
- Ride-matching services for carpools.
- Carshare programs for use of cars during the work day.

## Sustainability Framework

Recasting Trenton provides a clear action agenda addressing the three realms of sustainable development: environmental stewardship, economic stability, and societal equity. The Capital Park project will provide positive effects in all three realms, but the nature of the actions and the leadership by NJDEP focuses most of the benefits in the realm of environmental stewardship. The Capital Park vision acknowledges that the three realms are interrelated and that each has a profound effect on the other two.

### Environmental Stewardship

Environmental stewardship will focus on restoring habitat and providing educational experiences at the new Environmental Center located in the River Center building. Environmental impacts from flooding will be mitigated by restoring the floodplain and enhancing it with native lowland vegetation. The riparian ecosystem will transition to an upland forest in the sculpture park and then to an urban streetscape. Trenton will be sustained economically through residential development, commercial opportunities, and tourist attractions focusing on recreation, history, and culture. Building social equity will require cultivating the community's identity and enhancing accessibility via multiple transportation options and educational facilities.

### Ecological Approach

The concept of sustainability is grounded in an ecological worldview in which human and natural environmental systems are interrelated and

interdependent. Re-Casting Trenton is based on the assumption that restoring ecological function is a positive catalyst that will bring about change in the environment, and also affect societal and economic realms. Therefore, restoring ecological health to the waterfront will promote public health by restoring a missing part of a healthy, connected community. This in turn will promote social equity, providing improved and equal access for all residents and visitors to the city's great asset, its waterfront. Together, restoring ecological health and reconnecting the community will increase the value of the waterfront and spur reinvestment in the city.



The following strategies will be used to bring about environmental change:

**Balance:** Integrate and balance the amount of green/open space with development.

**Regionalism:** Highlight unique characteristics of the regional ecology. Maximize use of native plants, which will support and attract indigenous wildlife and help visitors and citizens appreciate local ecosystems.

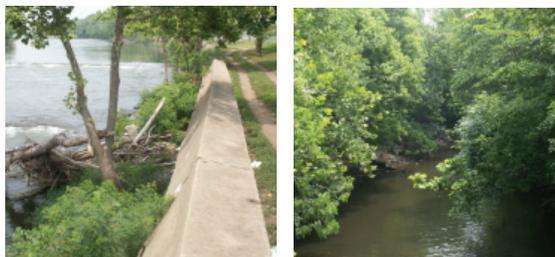
**Simplicity:** Work to manage environmental problems through natural solutions in lieu of controlling with technology. Creating self-sustaining landscapes may initially be costly to build, but will save time and money

### Environmental Restoration

The park contains riparian habitats in a degraded condition. The park will restore these environments as natural habitat.

### Riverfront / Assunpink Photos

The riverfront and the Assunpink offer the potential for significant environmental improvements.



in the long run. For example, encourage natural flooding regimes instead of manipulating with culverts and channels.

**Change:** Designate areas where landscapes can progress through succession. Showcase this type of landscape to educate the public on the value of disturbance in shaping diverse habitats. Ecology will visibly change over time.

**Native Biodiversity:** Remove invasive, non-native, and undesirable species. Develop a concurrent maintenance plan.

**Habitat Design:** Preserve/create large continuous sections of green space that will support high species diversity and be more resilient to degradation than smaller, fragmented parcels.

**Innovation:** Consider proven, innovative, sustainable technology for use in the park.

In keeping with Trenton's role in the Industrial Revolution, consider limited but significant applications of current technological innovation, especially in the realm of sustainable design.

## Security

New public spaces proposed under the master plan are designed to meet Crime Prevention through Environmental Design (CPTED) guidelines to provide an open and inviting area. Security threats in the area will be primarily “crimes of opportunity.” The master plan designs will provide openness and natural surveillance. The redesign of Route 29 makes Capital Park more accessible to the public while incorporating CPTED principles to enhance the safety of visitors. Landscaping elements will serve as natural barriers and boundaries. Areas may require camera coverage to assist in surveillance of events. Detailed security enhancements are design specific and will be addressed in subsequent phases of the project.

The State House Common eliminates the large surface parking lot, making parking a premium commodity for visitors to the area. Options include maximizing use of existing public parking and/or utilization of the State House Garage for visitors. There may be some security issues with using the State House Garage for public parking. The master plan team discussed this option with the New Jersey State Police and the Joint Management Commission (JMC). Limited opening of the garage areas for public parking can be allowed with proper security screening arrangements in place during normal conditions. Cameras, a key security element in this context, should be placed at garage entrances and queuing areas. Should conditions warrant under heightened security threat levels, the queuing lane would serve as an inspection lane for incoming vehicles (the VITETTA report recommended cameras at garage

entrances). As part of the master plan, a dedicated lane is provided to allow access to the garage. This lane serves the additional function of a queue, allowing the inspection of vehicles should the need arise.

All master plan areas incorporate security elements. Since the threat is considered low, these elements are integrated into the design rather than forming specific “concrete and steel” security components. CPTED principles provide for an open and inviting landscape, thus increasing security.

### Creating a Park Ranger / Ambassadors Program

A Park Ranger or Ambassador program should be considered for Capital Park both for security purposes and to assist visitors, school children, and state employees.

A Park Ranger/Ambassador program can be particularly effective in providing a “public face” to park visitors. Rangers/Ambassadors could function as park greeters and educators, in addition to being the “eyes and ears” of the park, along with the park maintenance staff. A Park Ranger/Ambassador is primarily concerned with the quality of the visitor’s experience, which means that they should intervene before there is a problem. Training programs in conflict resolution and park information would assist them in their job.

A Park Ranger/Ambassador program can help establish a public presence throughout the park that helps reduce crime and increases the sense

that the park is safe. Park Ranger/Ambassadors are meant to be seen as much as to see. Rangers/Ambassadors request visitors who are breaking park rules to comply and they explain the reason for the rules. If the problem continues, they can call the police for assistance.

Park Ranger/Ambassadors inform the public about the park and other local sites of cultural and historical significance. Park Ranger/Ambassadors help guide visitors to and through the park. A series of educational tours dealing with history and other topics can be developed for their use. The Park Ranger/Ambassadors would be a uniformed presence stationed in the park.

Park Ranger/Ambassadors can help to ensure that special event sponsors follow special event guidelines. They can be particularly helpful during load-in and load-out while policing unauthorized vehicles and infractions such as driving on lawns and parking under trees.

Ranger/Ambassadors can indirectly support maintenance and can help to enforce posted signs, protect recently reseeded areas and enforce park rules and regulations.

## Public Art

In Re-Casting Trenton, public art is considered a way to help connect the identity of Trenton's community, history, environment, and sense of place. The overarching approach is to integrate artistic principles seamlessly into the design of the park from the outset. The State of New Jersey has a program for commissioning and installing public art whereby 1% of the project's construction cost is used. This program would be applied for new buildings within Capital Park (e.g. Visitors Center).

The public art program will coordinate planning and design with the intent to provide a range of opportunities for artists to help express the city's tangible and intangible identity, history, and sense of place. The program will be administered to provide an overall strategy and plan for art, and to bring perspective and judgment to the commissioning, review and placement of individual works.

Themes for public art include the city's milling, steel, and ceramics heritage; its environmental setting; its position as the seat of state government; and other themes that may evolve as the program is developed.

Public art opportunities will be integrated into the design process of the park with an eye on artistic excellence and appropriateness to the site. Public art projects for the park will involve the participation of the State Council on the Arts and State Museum for the identification of artists and the review of proposals in order to achieve the highest quality projects. This effort will also include the creation of best practices ranging

from soliciting proposals from artists to developing procedures for the temporary display of outdoor art or for administering the occasional offer of substantial gifts of outdoor artwork. In addition, it is anticipated that public art projects throughout the park will involve cultural entities such as the Old Barracks, the Thomas Edison State College, State Archives, Historical Commission, MLK Commission and State and City Libraries for input and information, depending on theme and location of the project.

Public art projects should be incorporated to reinforce the themes of Capital Park. Types of possible artworks by Capital Park theme category include:

Government and History: Maps, Historic plaques, Murals, Portable structures for reenactments, Archaeological sculptures or reconstructions

Environment: Environmental Center landscape sculpture/art, “green” architectural treatments for garage, Gardens for bridges, Water features like bio-canal, Roof-scapes for new garages and buildings, Eco-demonstration sculptures etc.,

Industry: Beacon pylons, sculptures (wire/steel), ceramic tile

Infrastructure: Bridges, Manhole covers, Paving, Seating, Lighting, Railings, Tree grates, Restroom tiles

## Signage

**Design a coordinated wayfinding and interpretive signage system for use throughout the park system.**

Such a system needs to be coordinated with the previous work done by the City of Trenton and the Trenton Convention and Visitors Bureau, which sponsored a study for graphics and mapping of historic assets around the Capitol Complex and City of Trenton. This study resulted in clear and compelling icons that serve to identify the district and are integrated into signage; including a patriot in profile and a tricorn hat.

## Site Furnishings

**Prepare an updated set of design guidelines for Capital Park, building on existing guidelines.**

Site furnishings include benches, trash receptacles, water fountains, bicycle racks, etc. Site furnishings should be coordinated with signage, lighting, and other site design features to ensure an appropriate degree of compatibility. Furnishing selection must span a very wide range of styles to be compatible with the building styles of the Capitol Complex. Site furnishings should be durable, attractive, and generally unobtrusive.

A further cycle of focused design study is necessary to determine whether the overall palette should be a unified image that defines Capital Park or several site-specific palettes that address the sharply varied character of the Capital Core, the creek, and the riverfront.

**The strong thematic basis of craft lays the groundwork for a comprehensive public art project with four expressions throughout Capital Park: sculpture, earth art, light, and sound.**

## Lighting

### **Create a unified and welcoming nighttime image that uses lighting wisely and economically to create a lively and safe park.**

Site lighting includes six types of lighting: street, pedestrian, special event, monumental, beacon pylons, and art lighting. Overall, lighting is a key to the transformation of people's attitudes about Trenton, especially its desirability as a nighttime destination, which is key to repositioning Trenton as a tourism destination.

Street lighting should be unified to convey a cohesive feel and orientation for motorists on the street system in and surrounding Capital Park, including the Route 29 Boulevard, West State Street, and other local streets. The design of street lights should be of the same character family as the pedestrian lights. Street lights should be pole-mounted at a maximum height of 25-30'.

Pedestrian lighting should extend to the streets, parks, and courtyards to provide a reduced scale appropriate to Trenton's fine-grained architectural character, and to underscore the intent to create a safe and attractive pedestrian realm. Pedestrian lighting should be pole mounted at 12-15'.

Both street and pedestrian lights should be considered as candidates for a demonstration of off-the-grid solar lighting, and should be designed to limit light spill to comply with Dark Sky guidelines to the greatest extent possible. Lighting design should be considered with Dark Sky

guidelines in mind to strive for reasonable limits on spill. Project goals should be evaluated with NJDEP prior to embarking on this effort to determine what adherence to Dark Sky provisions would dictate, and what compromise would be possible or necessary to balance Dark Sky and urban revival.

Special event lighting will be provided to enable nighttime use of the State House Common, the garage deck and Museum plaza, Assunpink Park at Broad Street, and Riverfront Park. Special event lighting will include the pre-programmed capacity for theatrical lights (power supply and mounting design).

Monumental architectural lighting will highlight the key architectural features of the city, some of which are already illuminated, and some of which will be reevaluated for the effect and effectiveness of the lighting. These features include: the State House and dome, War Memorial, Planetarium, Battle Monument, exposed archaeological ruins along Petty's Run and the Assunpink. The lighting will also include key bridges: the South Broad Street Bridge, Trenton Makes, Amtrak (PRR) Stone Arch Bridge, Calhoun Street Bridge, Route 29 Bridge, and the Garden Bridges.

Beacon Pylon Lights will be custom-designed structures that mark special points in the Capital Park. Pylons will be located at the Riverfront Park and Creek Park. Pylons will be designed to abstractly evoke the scale and traditional cone or bottle shape form of the city's historic ceramic kiln industry. The pylons will be open, conical steel structures with

integrated light fixtures. The pylons could have several high tech options to distinguish the park during special events, such as fire fountains or laser “vectors” that connect the dome, Battle Monument, and Broad Street Bridge. Special effects would be considered as additional features that would operate on a very limited basis of several hours each. Timing of these events could employ a hierarchy of effects that would be evident on a weekly, monthly, seasonal, holiday, or commemorative date basis.

Art lighting will include opportunities for specially-designed installations, permanent or temporary, monumental or small in scale, to highlight significant parts of Capital Park and surroundings.

## Planting

**Create a coordinated planting palette that provides an overall unifying spatial framework and creates areas of special interest to enhance the park visitor experience.**

Planting will address concerns for limited maintenance by concentrating higher maintenance landscapes such as shrubs, herbaceous annuals, and perennials in limited areas of high visibility. The planting plan will create a sustainable landscape with a reduced maintenance load by devoting large swaths of the landscape to reforestation and meadow, requiring only seasonal maintenance once established. Where possible, the plan will build on existing vegetation, such as on West State Street, in the northern end of the riverfront park, and the hotel block of the Assunpink Park. In certain cases, major change will be in order to create the

intended dramatic and memorable effect, such as the New Jersey Garden on the garage roof.

Planting will utilize New Jersey native species exclusively along the riverfront and creek. In highly formal and urban spaces other non-invasive species that are naturalized in New Jersey and in particular have a symbolic meaning in the state will be used.

A diverse planting design will be used to address the highly varied conditions of the park. The upland landscape will utilize a grid pattern that begins with the geometric order of West State Street’s street trees and becomes progressively more random as the tree canopy moves toward the river, creating a more naturalized appearance in keeping with the riverfront ecosystem.

The planting plan will reflect and demonstrate the aesthetic and environmental advantages of mirroring the natural and urban ecological conditions in the park. The ecological gradient from the moist bottomland along the river to the upland barrens and ecotype of the roof deck will provide an opportunity to create a landscape that is biologically sound, visually appealing, and educationally enriched.

## Paving

**Create a flexible system of paving types that provides a range of effects from highly formal and elegant near the State House to more rugged, casual and naturalized at the riverfront.**

To improve pedestrian connections throughout the park, vehicular circulation high density pedestrian areas will be demarcated as shared pedestrian zones. Paving to accommodate vehicles in areas such as the Barrack Street dropoff, executive parking area, Memorial Drive, and major cross walks should be pedestrian-scaled using textured unit pavers of concrete or asphalt.

Paving material and layout in flood- and ice floe-prone areas along the riverfront and the creek will be selected and designed for superior durability and relative ease of cleaning. The sustainable design of these waterfronts will address and balance cost, visual amenity, constructability, and desired life cycle.

## Utilities and Infrastructure

**Employ all applicable green development standards to reduce the need for major infrastructure through water and energy use efficiency.**

City and park utilities and infrastructure should be designed and constructed to leverage park improvements and limit disturbance to the park areas in the long term. The park should be used to help facilitate urban stormwater filtration. Where possible, dedicated utility corridors should be created to efficiently accommodate underground infrastructure.

## Flood and Ice Conditions

Management will include securing and cleaning the park after major flood events. Re-casting Trenton requires a tradeoff of civic priorities: exchanging the preponderance of days with unlimited access to the river-front, including the water's edge, for the limited (but seriously frequent) times when the parkland along the water will be inaccessible, salt-laden, debris strewn and possibly impaired. This tradeoff exchanges the existing sterile but easily maintainable bulkhead wall for a terraced, bioengineered slope.

## Making Trenton a Destination

### Capital Park Programming Goals

The role of existing institutions will be critical to the park's success and sustainability. Collaborative or co-produced programming to make Capital Park a "museum without walls," in addition to the Park's use as a venue for each institution individually, is a huge opportunity.

Locating each programmatic element within the Capital Park will ensure that it becomes a destination and attraction for visitors, state employees, school children and Trenton residents year around. The broader goal of the park programming is to enhance what is already on the Capitol Complex and to expand the program offerings beyond the subject of history.

Further visioning and market testing will be critical to determine a desirable and viable approach to all or some of these elements. As has been mentioned in other sections, it is possible that subsequent visioning work will lead us to identification of appropriate operating partners for some elements. A formation of a coordinating agency to operate and manage Capital Park and its programs is necessary.

The following recommended actions are based on the cultural needs analysis and stakeholder interviews.

Coordination of existing cultural organizations adjacent to the park should begin immediately.

- A source of financial support for the ongoing operational requirements of the park's public programming and new institutions should be identified. Similarly, an appropriate governance structure must be determined. A project of this magnitude must have significant support at the government level, amongst collaborators and within the community. Ensuring that existing institutions are compensated for new activities will also be a critical success factor in their participation in park programming.
- Designate a point person to coordinate with existing organizations.
- A cultural advisory committee should produce a brief on the nature and cost of a possible/proposed program aimed at audience development and sustaining support for the project.
- Implement some programming in the park by Spring 2008 to build a base audience and advocacy for continued park development. This will require incremental funding for the organizers and producers.
- Build partnerships with existing historical sites, museums, and recreational resources in Trenton and New Jersey to ensure the project maximizes investment and is aligned with other regional efforts to benefit the community. With Trenton's rich history and several sites "where history happened," Capital Park could be coordinated with other historic sites to provide thematically-linked experiences.

A cultural amenity such as the park is not likely to counter Trenton's perceived image on its own. Trenton's image and visitor amenities must be improved to attract and support new audiences. This is a substantial

**The park spaces will enable people to gather, relax, and learn about the City's historic, cultural, and natural resources, amid places to highlight and improve the urban environment.**

### Cultural Center

The State Museum, Auditorium, Planetarium, and Library will become a “Museum without Walls” integrated into the park landscape.



problem that will take many years and significant investment and coordination. Partners should be sought in as many agencies and levels of government as possible to develop a comprehensive marketing and public relations effort.

The master plan is the first step in a process toward developing a complete plan for the cultural elements of the park. Subsequent steps should include a visioning workshop, market research, a review of existing public programs, identification of collaboration opportunities, articulation of future institutional and collaborative public programs, and development of a staffing and operational strategy. These elements would feed into a full business plan, identifying attendance, revenue, and expenses for both new cultural institutions and collaborative programming that would be developed with adjacent institutions.

## Recommended Capital Park Programs

### Cultural Arts Programs

- Integrate event programming with the War Memorial, the State Museum, Old Barracks and other such existing cultural institutions.
- Develop programming for the State House Common in cooperation with performing arts venues.

### General Recreation Programs

Provide passive open space to serve residents, workers, and visitors to the park system. Passive open space features will allow for such unprogrammed activities as strolling, nature observation, and picnicking.

### Historic Interpretive Programs, Tours and Educational Programs:

- Reenactments and Drills
- Patriots Week
- Petty's Run Archeological Investigation
- New Jersey State House tours
- The Old Barracks tours and programs
- South Broad Street Bridge / Assunpink and Mill Hill Parks
- State House Common
- Trent House
- The War Memorial
- State Museum
- Proposed Environmental Center (River Pavilion)
- Proposed Heritage Center at the Assunpink

### Commercial / Concession Opportunities

- Café locations at: Visitors Center, River Pavilion, and South Broad Street
- Bicycle Rental at: Upper Riverfront Park or River Center and Downtown

### Special Events

Special events can attract thousands of visitors for a one-time event. For example, "Heritage Days" and the annual Trenton Jazz Festival have been held on the State Capitol grounds. ETM Associates, a member of the

master plan consultant team, has provided recommendations to address the impact of special events on the Capital Park landscape and to address preliminary guidelines to protect the park landscape and programming intent. These recommendations and guidelines are provided in the Park Management and Operations section of the Appendix.

In addition to special events, regular park programs should be developed to provide a balanced and continuous attraction to park visitors in order to strengthen and support the park's overall mission.

### Capital Park Programs

- Media Screen Events - "Thursday evening at the Movies"
- Rallies and Speeches
- Historic Tours
- Re-enactments
- Festival of Flowers
- Picnics
- Seasonal markets
- Fishing
- Canoeing and Kayaking
- Walking, Jogging, and Bicycling
- Nature Observation
- Children's and family programs

- Proactive history programs with local and regional schools
- Parking
- Visitors Center
- Environmental Center
- Industrial Heritage Center
- Sculpture Park
- Memorials (Living Memorials only)
- New Jersey Gardens/Displays
- Arts-in-the-Park program
- Fountain(s)
- Other concessions (bicycle/watercraft rental)
- Civic Ceremonies
- Archaeological Exhibits
- Café(s)
- Wi-Fi Hotspots
- Historical Interpretive Exhibits
- Natural History Exhibits
- Festivals and Fairs
- Music and Theater Performances
- Lunchtime “Music-in-the-Garden”

### **Capital Park Major User Groups**

- Local Residents
- River neighborhoods
- Inland neighborhoods
- Downtown residents
- Mercer County / PA
- State Employees
- Downtown Employees
- School Students (via bus)
- Tourists (Day, Overnight)

## New Visitors Center

The park plan includes a new Visitors Center for the Capitol Complex as part of tourism development and providing a base of operations in a major park facility. This center must be centrally located to provide access to the various destinations within and surrounding the park and complement the recently opened Downtown Visitors Center managed by TDA at Barrack and West Lafayette Streets. The Capital Park Visitors Center will perform the following functions:

- A meeting or rendezvous point at the capitol that is a public place and is outside the security perimeter.
- A staging location for tours of the capitol.
- A space for exhibits and educational displays about state capitol history.
- An orientation center with an information counter.
- Restrooms for park visitors.
- A café/restaurant.
- A lunch room (especially for school groups).
- A lecture space.
- A gathering space for events

**The great expansion of capital open space and its diverse range of settings and configurations provide many options for activity and event programming.**

